The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLIX. CHICAGO, ILLINOIS, NOVEMBER 16, 1907. No. 20.

Address

THE CRIMINAL RESPONSIBILITY OF INSANE PERSONS.*

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON NERVOUS AND MENTAL DISEASES OF THE AMERICAN MEDICAL ASSOCIATION, AT ATLANTIC CITY, JUNE, 1907.

MORTON PRINCE, M.D.

Physician for Nervous Diseases, Boston City Hospital.

BOSTON.

In a trial which has recently aroused the attention of the whole country to a degree unusual even in criminal trials, the failure of the jury to arrive at an agreement regarding the mental responsibility of the defendant has awakened attention to the jury system and the law of criminal responsibility. Doubts have been freely expressed by thinking persons as to the capability of juries to correlate the facts with the law as expounded by the courts, and as to the soundness of the psychologic principles the law formulates.

In view of the wide public interest which has been excited, the great diversity of views which have been publicly expressed (for, like the Dreyfus affair, the case has been tried before the great jury of the public as exhaustively as before that of the court), and the importance to society that criminal acts shall not go unpunished where a just responsibility exists, and that the verdict, whatever it may be, shall meet with the approval of the community, it would seem as if the time had come to reopen the question of criminal responsibility.

If I take this question for my theme, it is not without some hesitation and personal misgiving, for I realize the difficulties inherent in this most intricate of problems, in which are bound up some of the most subtle questions of psychology, of public expediency and of law. Yet the time and occasion are opportune and invite the task. Few, if any, problems are ever settled for all time; new data accumulate, our knowledge grows, conditions change. In conformity with this progress, it is incumbent on us from time to time to readjust our conceptions and our procedures. This is as true in matters of public policy as in medicine and the other sciences. Criminal responsibility rests on the law of the land as expounded by the courts, but beneath the law are the fundamental principles on which in the last analysis the law rests, namely, the laws of the human mind which determine what the law ought to be, or, more concisely, what ought to constitute responsibility, who are "rightly liable to punishment" and ought to be punished.

As a medical man, I do not venture to discuss the law of the land. That is the province of the jurist. It has become gradually evolved through a series of decisions delivered by legal minds. But, while the determination of the law should be made by those learned in the law, the determination of those conditions of the mind that lead to mental irresponsibility, in the sense of what ought to constitute responsibility, whether formulated into law or not, should be made by those learned in diseases of the mind.

The law governing irresponsibility for crime on the ground of insanity was formulated in the famous answers of the English judges to the inquiries of the House of Lords in 1843, as follows: "To establish a defense on the ground of insanity, it must be clearly proved that at the time of committing the act the accused was laboring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong." The law as thus defined has continued in England and America to the present day.

It is not, I believe, generally understood by laymen that the law in the great majority of the states and in England is not statute, but common law.[1] This is not entirely without importance, at least to my way of thinking, for statute law is the expression of the point of view and wishes of the community. If it does not represent public opinion in the matter which it governs, it can be amended or repealed, a process which is constantly taking place to make laws conform to the progress of thought and the changes in public sentiment. This sentiment itself is very largely molded by the diffusion through the community of information on any given subject by those who have special knowledge of it. So that in the case of mental responsibility, for example, the special knowledge of those who are learned in the diseases of the mind can make itself felt in shaping legislation which shall determine responsibility before the law. It is quite different with common law, which is the formulation of the opinions of a very learned body of men, but learned in a special branch of human knowledge—the law, a large part of which is made up of those opinions. Public opinion and sentiment to a very slight extent and only indirectly can shape, amend or formulate such laws; they rest entirely on the attitude of mind, the wisdom and special knowledge of judicial minds; nor can the knowledge of those learned in other branches of research, excepting indirectly, guide in their evolution. Fundamentally, every opinion rests on knowledge, and when any given opinion, such

*The article is slightly abbreviated. It appears in full, however, in the Transactions of the Section and the author's reprints.

1. In New York the common law has been codified as a test of responsibility; in South Dakota by statute, insane persons are not liable to punishment, "on proof that at the time of committing the act charged against them they were incapable of knowing its wrongfulness." In California and North Dakota no insane person is liable to punishment by the criminal code. I have not thought it necessary to examine the statutes in all the states, as those where a test of responsibility has been codified are known to be the exceptions. In some, even where the penal laws have been codified, the common law still remains in force so far as concerns irresponsibility on the ground of insanity (for instance Idaho and Utah).

as that of what ought to constitute mental responsibility, rests on knowledge of a special branch of human inquiry, mental disease, its wisdom is directly proportionate to the knowledge which he who expresses it has of that special branch of learning. When an opinion is judicially expressed, from that moment, by agreement of society, but none the less arbitrarily, it ceases to be an opinion and, unless overruled by other judicial opinions, becomes law. "That is not the law, Mr. Paine," a Massachusetts judge is said to have observed to that distinguished member of the bar. "It was the law until your honor spoke," was the retort.

As a matter of fact, the law recognizes that there are effects of disease on the mind which ought to relieve the individual of criminal responsibility, yet it is logical and permissible, if public policy so directs, that no relief of responsibility shall be admitted because of insanity; but once accept the principle that an abnormal condition of mind may relieve an individual of responsibility, and the determination of the sort of mental alteration which ought to involve irresponsibility must rest on a study and intimate knowledge of mental disease. There is no other knowledge that can determine that question. Further, if the law, after recognizing the principle that some persons ought not to be punished because of mental disease, adopts a test of responsibility which would punish those who, by the common consent of those who are familiar with the effect of mental disease, ought not to be punished (or vice versa) it becomes inconsistent and unreasonable. The legal opinion, then, which becomes the law and test of responsibility ought to be founded on common psychiatric knowledge, but knowledge in everything that pertains to natural science is progressive, while the law is conservative and lags behind the march of knowledge.

The question which those who are learned in derangements of the mind desire to reopen is whether scientific knowledge has not shown that the judicial knowledge on which judicial opinion has formulated mental responsibility in law was insufficient and, therefore, that the legal creeds should be modified. Legal, like religious, creeds may persist as empty formulas, while the opinions from which they sprung may change with each new increment of knowledge. Learned minds then continue to debate the formulas as if they had the force of truth and not only that of the power of organized society to enforce its will.

HISTORY OF THE LAW.

The circumstances under which the law was formulated in its present phraseology is not without bearing on an intelligent examination of the question. It arose out of what has become, in consequence, the celebrated case of McNaghten. In 1843 "McNaghten, being under an insane delusion that Sir Robert Peel had injured him, and, mistaking Mr. Drummond for Sir Robert Peel, shot Mr. Drummond dead with a pistol." The questions submitted to the jury were: "Whether, at the time the act in question was committed, the prisoner had or had not the use of his understanding so as to know that he was doing a wrong and wicked act; whether the prisoner was sensible, at the time he committed the act, that he violated both the laws of God and man." McNaghten was acquitted.

In consequence of the popular alarm over the verdict, the House of Lords submitted four questions to the fifteen judges of England, asking for an opinion of the law governing responsibility for certain offences committed by persons afflicted with certain kinds of insanity, and also as to the terms in which the question should be submitted to the jury in such cases. The answers were unanimously given by fourteen of the fifteen judges and have been the law ever since, but, as will presently be pointed out, have been extended in application to classes of insanity which, some believe, the judges never had in mind, and to which they did not apply their answers.

It is interesting to note that the first question presumably was intended to cover the McNaghten and Hadfield cases. The questions and answers are as follows:

QUESTION 1.—What is the law respecting alleged crimes committed by persons afflicted with insane delusion in respect of one or more particular subjects or persons, as, for instance, where, at the time of the commission of the alleged crime, the accused knew he was acting contrary to law, but did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some supposed public benefit?

ANSWER 1.—Assuming that your lordships' inquiries are confined to those persons who labor under such partial delusions only, and are not in other respects insane, we are of opinion that, notwithstanding the accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable, according to the nature of the crime committed, if he knew at the time of committing such crime that he was acting thereby excused?

QUESTION 4.—If a person under an insane delusion as to existing facts commits an offense in consequence thereof, is he contrary to law, by which expression we understand your lordships to mean the law of the land.

ANSWER 4.—The answer must of course depend on the nature of the delusion; but, making the same assumption as we did before, namely, that he labors under such partial delusion only, and is not in other respects insane, we think he must be considered in the same situation as to responsibility as if the facts with respect to which the delusions exist were real. For example, if under the influence of his delusion he supposes another man to be in the act of attempting to take away his life, and kills that man, as he supposes in self-defense, he would be exempt from punishment. If his delusion was that the deceased had inflicted a serious injury to his character and fortune, and he killed him in revenge for such supposed injury, he would be liable to punishment.

QUESTION 2.—What are the proper questions to be submitted to the jury when a person, afflicted with insane delusions respecting one or more particular subjects or persons, is charged with the commission of a crime (murder for instance), and insanity is set up as a defense?

QUESTION 3.—In what terms ought the question to be left to the jury as to the prisoner's state of mind when the act was committed?

ANSWERS 2 and 3.—As these two questions appear to us to be more conveniently answered together, we submit our opinion to be that the jurors ought to be told, in all cases, that every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction; and that, to establish a defense on the ground of insanity it must be clearly proved that at the time of committing the act the accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong. [The remainder of the answer goes on to discuss the usual way the question is put to the jury.]

INCOMPLETENESS OF THE QUESTIONS AND ANSWERS.

These questions and answers have been critically analyzed both from a psychologic and a legal point of view by the distinguished Justice FitzJames Stephen and very recently by Dr. Charles Mercier in his work,

"Criminal Responsibility." Any one who wishes to examine the principles of responsibility, as well as the criminal law of the same, should familiarize himself with the writings of both these authors. Stephen, who has written voluminously[3] on the subject and with considerable psychologic insight, has pointed out certain defects on the psychologic side in the law as defined by these answers. Mercier, with great acumen, has examined at much length what ought to constitute responsibility and has given, as it seems to me, a valuable analysis of the answers. In many points both these writers, one a learned judge and one a learned alienist and psychologist, are in accord. Mercier points out some curious and interesting facts regarding the relations of the answers to the questions and of both to the law as it has been applied ever since. Attention had never before been called, as he avers, to the fact that all four questions are not general, but restricted. Question 1 relates to persons who are afflicted with insane delusion in respect to one or more particular subjects or persons. Nothing is said about insane persons without any delusion, or to persons with general delusions, etc. But even this restricted question and that of Question 4 the judges do not answer, but, as Justice Stephen also points out, make a still more restricted reply by assuming that the "inquiries are confined to those persons who labor under such partial delusion[4] only, and are not in other respects insane." This is a psychiatric assumption which probably has no basis in fact. In consequence a very serious difficulty is encountered and left untouched, as Justice Stephen says. This difficulty is the objection which medical men have frequently raised to the law, and develops one limitation to it, at least, and in consequence of which it did not even touch the McNaghten case as that case was decided by the jury. The difficulty is clearly and, from a medical standpoint, soundly stated by Justice Stephen as follows:

> How would it be if medical witnesses were to say (as Dr. Griesinger says, and as the witnesses in McNaghten's case said in substance) that a delusion of the kind suggested never, or hardly ever, stands alone, but is in all cases the result of a disease of the brain, which interferes more or less with every function of the mind, which falsifies all the emotions, alters in an unaccountable way the natural weight of motives of conduct, weakens the will, and sometimes, without giving the patient false impressions of external facts, so enfeebles every part of his mind that he sees and feels and acts with regard to real things as a sane man does with regard to what he supposes himself to see in a dream? On these questions the answer throws no light at all, because it assumes the man to be insane in respect to his delusion only, and to be otherwise sane; in a word, the prisoner is treated as a sane person under a mistake of fact for which he is not to blame.

The difficulty becomes emphasized if we are entitled to say, as Dr. Mercier says: "There is not and there never has been a person who labors under partial delusion only and is not in other respects insane." Here is where the judges fell into a trap of sophistry owing to their unfamiliarity with mental disease and the ways in which the various faculties of the mind are affected. I take it that all medical men will be unanimous in the view that delusions are the effect and expression of a general mental derangement and not the derangement itself, and, therefore, that the mind must be otherwise deranged than as shown by a particular delusion. There is probably in every case some dementia, and if a person is not otherwise insane he would not have a delusion. This makes the difference between an insane delusion and that kind of false opinion in sane people which under another use of the term is called a delusion.

The question is of a proper test of responsibility, and the test of the judges, so far as it is contained in Answers 1 and 4, is placed in doubt when their fundamental conception is shown to be erroneous. The assumption of the judges on which these answers were based, viz., of a person laboring under a mental delusion, but not otherwise insane, is fallacious.

Questions 2 and 3 apply to "a person afflicted with insane delusions respecting one or more particular subjects or persons," and ask what are the proper questions to be submitted to the jury. It was in their answer to these two questions that the judges gave their famous reply: "That [for persons with delusions[5]] to establish a defense on the ground of insanity it must be clearly proved that, at the time of committing the act, the accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act that he was doing, or, if he did know it, that he did not know that he was doing what was wrong."

It will be noticed that these two *questions* refer to a particular class of the insane; namely, to those suffering from delusions; while it has happened that the *answer*, which has become the law, has ever since been applied to all the insane, whether they suffer from delusions or not.

Mercier has argued at considerable length that the judges in this answer must have referred to and must have intended their answer to apply only to those persons referred to in the question; namely, who are afflicted with delusions.[6]

Not being trained in the interpretation of the law, I do not feel so clear about this. If the answer is to be understood as a direct reply to the question asked, as it is logical to assume, then it would have this meaning if the words, "for persons with delusions," were understood to be implied after "that" and before "to establish a defense." It would then read "that for persons with delusions to establish a defense on the ground of insanity," etc. This reading is entirely compatible with the questions and the context, and it is the one which seems to have been assumed by no less a learned lawyer than Justice Stephen.[7]

On the other hand, it might fairly be argued that the

3. A History of the Criminal Law of England, vol. ii, chap. xix, 1883. A General View of the Criminal Law of England, 2d edition, 1890. The Policy of Maintaining the Limits at Present Imposed by Law on the Criminal Responsibility of Madmen. Papers of the Judicial Society, 1855-1858. A Digest of the Criminal Law, 1877.

4. Partial delusion was apparently used as a synonym for monomania.

5. These words in brackets were not in the original answer, but are here interpolated for the purpose of making clear the interpretation mentioned below.

6. Mercier, indeed, goes further, and thinks that it is probable from the language and the context that the judges, in their answer to this question, intended to refer to persons who "labor under partial delusion and are not in other respects insane." It does not seem to me that this interpretation is warranted. Mercier, however, admits that it is open to doubt.

7. A large part of Stephen's argument is devoted to a defense of the judge's answers on the ground that delusions may be evidence of a mind being so diseased as not to know, in a broad, not literal, sense, that an act is wrong or as not to be able to control conduct. While his argument is based on the assumption that the answers referred only to persons with delusions, apparently he himself would by implication apply it to all forms of insanity. While Stephen's views as to what the law ought to be seem reasonable and sound as far as they go, his reasoning by which he attempts to bolster up the law as it is, is confused and far fetched. Further, the point does not seem to have specifically occurred to him that if the judges referred only to cases with delusions then the law was not intended to cover other kinds of insanity, and yet he himself apparently would so extend it.

judges intended to go beyond the questions and to lay down the law not only regarding persons with delusions, but regarding all insane persons whether they had delusions or not. Whichever meaning be correct, one thing is plain, and that is that the intention of the judges is not clear, and it is remarkable that, with this uncertainty in the meaning of the judges, their answer should have been applied ever after as the law, without question, to all insane persons. That those learned in the law, who are most keen to point out defects of understanding of legal principles in laymen, should have continued thus either to pervert the meaning or disregard the ambiguity of the answers is a curious commentary on the human mind. However, such has been the case and, *ipso facto,* the answers have become the law, rightly or wrongly, in every case where any form of insanity is alleged in defense. But this extension of the application has had consequences in the distortion of the meaning of the English language which, as Macaulay would have said, every school boy would take exception to. I will return to this later, merely pointing out, as has been often done, that the application of the law hangs on the meaning of the word "know" in the phrase, "as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong."

But let us take the law as it stands and see how far it is a test and definition of responsibility, as that has been defined by the law. As I have before said, it is far from my purpose to discuss what the law is; that is, how it is to be interpreted, a task which is necessarily reserved for the lawyer, but to consider, first, whether under any interpretation the test of responsibility as submitted in accordance with the law to juries is a test of a certain psychologic state, a sound test of a state of mind which the law recognizes and attempts to define; second, whether it is a sound test of what ought to constitute responsibility; and, third, to discuss in a general way what the law ought to be, without regard to what it is, just as a legislator would have to consider the question if he were to enact a statute. These questions are largely psychologic questions, for, as the law was laid down by Mr. J. Tracy in the case of Edward Arnold, "guilt arises from the mind and the wicked will and intention of man, and if a man be deprived of his reason and consequently of his intention he can not be guilty."[8]

THE FORMULA AS A TEST OF WILL AND MALICE.

Insanity is not legally an excuse for an alleged crime "unless it produces in fact one or other of certain consequences." Justice Stephen has explained, and I must assume correctly, that the plea of insanity is only material so far as it traverses the charge that an act was done with "will and malice." The same principle was laid down by Lord Hale and since his time has been laid down again and again.

Now, "malice or maliciously mean an action flowing from a wicked and corrupt motive, a thing done *malo animo mala conscientia,*" as Foster[9] said.

"A jury, therefore, is not impaneled to try whether or not the prisoner is mad, but whether or not he is a wilful and malicious murderer." . . . "They [the judges] have laid down tests of responsibility, or, more strictly speaking, have specified facts from which, when juries have found them, judges are to infer malice" (Stephen).[10]

The principle, then, may be thus stated:

Any one who commits a wrong act wilfully and maliciously is guilty of crime and is liable to punishment.

Any one who commits a wrong act, but, because of insanity, does not act wilfully and maliciously, is not guilty of crime and is not liable to punishment.

In the opinion of the fourteen judges of England, a test of absence of will and maliciousness in an insane person is not knowing the nature and quality of an act, or, if he does know it, not knowing it is wrong.

In the final analysis, then, the test is a psychologic one. Is it a sound and reliable test of absence of will and malice? The way to satisfy any doubts on this score is to apply it to actual cases which have been adjudicated, or well-known cases, the facts of which are not in dispute. Take the celebrated case of Hadfield. Hadfield, who thought himself our Lord and that, for the salvation of the world, he should die, deliberately fired at George III in order to be hung and that the world should be saved. He knew, as Stephen admits, what he was doing, that he was trying to kill the king; knew he was breaking the law and that he should be punished. He knew, therefore, the nature and quality of his act and that it was wrong. This formula of the judges should, therefore, if sound, have proved malice, and yet no reasonable person could hold that he acted with malice, nor did the judge so hold, for so evident was the contrary that the trial of the case was stopped by the court. The formula of the judges in this case, then, breaks down as a test of this oft-repeated principle of law. Which shall we cling to, the formula or the principle?

In numerous other kinds of cases, including cases without delusions, the formula will be found on examination likewise to break down. Take acts done under irresistible impulses or desires, whether homicidal, forging or stealing. These impulses are fairly well accepted as due to automatisms outside of the will. The afflicted persons know the "nature and quality of the act," etc., and, according to the formula, their acts should be wilful and malicious; but they are not wilful, for the subject fights against them; they are not malicious, for he begs piteously to be saved from himself.

As the knowledge defined in the formula does not prove malice, so the converse is also true: the absence of this knowledge does not show absence of will and malice. McNaghten, for instance, certainly acted wilfully and maliciously, and yet the jury held in acquitting him, if they followed the judge's charge, that he did not know the nature and quality of the act, or, if he did know it, that he did not know it was wrong.

The well-known case, cited by Dr. Taylor, of the man who had some insane delusion about windmills is a good illustration of the incompetency of the formula to prove absence of malice, even when interpreted in the broad sense in which Justice Stephen holds it should be taken. As will be presently explained, this writer thinks that by knowing that an act is wrong should be understood the ability "to judge calmly and reasonably of the moral or legal character of a proposed act." The man in question, owing to his delusion, would pass hours in watching windmills. To cure him, his friends kept him out of the way of windmills. He thought that if he committed a crime he might, as a punishment, be confined in some place where he could pass all his time watching windmills. So he mutilated and nearly killed a little

8. Quoted by Stephen.
9. Criminal Law, p. 256, quoted by Stephen.
10. Criminal Responsibility of Madmen.

girl. Now, that this man's motive was wilful and malicious seems to me beyond doubt. It was that through punishment he might gain an advantage for himself, as much as if he had murdered a man for his money. In fact, he did gain his end, for he was confined in such a place as he desired. He knew his act was wrong in the narrow sense, but that he knew it was wrong in the broad sense in which Justice Stephen would interpret the formula seems to me can not be reasonably held, and from the implication of his language it would appear that Stephen held the same view. Whether the man ought to have been punished is immaterial to my point, which is that absence of knowledge even broadly interpreted is not a reliable test of absence of malice. And so with numerous other cases that might be cited. Epileptics who not infrequently kill people while in their fugues or automatisms at such times act wilfully and maliciously, but, in the dream state in which they are, can not be said to have a knowledge that their act is wrong. The German case of Sörgel is in point.[11] In one of his fugues he killed a wood chopper whom he met in the forest that he might, according to a tradition, use his blood in a particular way to cure himself of epilepsy. On coming to himself some days later, he had no recollection of his deed and was acquitted by the court. In his delirious state he could have had no knowledge that his act was wrong. Likewise some cases of double personality in their second states acquire a criminal nature and commit illegal acts.[12]

We see, then, when we submit the principle of will and malice and the formula of the judges to the test of actual cases, that neither supports the other, and even that will and malice can not be held as a test of what ought to constitute responsibility.

If, in practice, every insane person who acts wilfully and maliciously were held liable to punishment and punished, I believe that the way it would work out would be that the moral sense of the community would be so shocked that the judicial law would not receive the support of public opinion and a statute law would be enacted in its place.

Indeed, I can not help thinking that the attempts to make the formula of the judges square with the principles of "will and malice" is but an attempted feat in logic to bolster up an insufficient psychologic test by reference to a principle of law which is antiquated and played out in its application to insanity.

THE FORMULA AS A TEST OF WHAT OUGHT TO CONSTITUTE RESPONSIBILITY.

But let us examine the formula of the judges, not as a test of another principle of law, but as a principle in itself, and see if it is a criterion of what ought to constitute responsibility.

It is plain that a great deal hinges on what is to be understood by the word "know" in the formula. Is it to be taken in its "obvious and literal" meaning, or is it to be interpreted in a broad way so as to cover all collateral knowledge with calm and judicial reasoning powers? Both views have been and are held. Let us examine the narrow view and see how far the formula will cover well-known cases. Take cases of insane people with delusions; it certainly fails in the Hadfield and McNaghten cases, as it failed in those cases as a test of will and malice. It would fail in Dr. Taylor's case of the windmill man, unless it be thought that he ought to be punished, a questionable view. Again, take insane people who commit crimes in consequence of hallucinations. It is not very uncommon for a person to murder his children because he hears the voice of God commanding him to do so. Such a person knows that he is doing what is wrong in the legal sense. The ordinary legal view of such an act would be that the hallucination was the sole cause of the act and that he might be otherwise sane, but this is an entirely inadequate conception of the mental condition. In a great many, if not in all, such cases, the hallucination is not a sporadic phenomenon of false hearing, but arises as a result of previous false reasoning and illusions. He has the hallucination because in consequence of an already existing mental derangement he believes that he ought to kill his children for one reason or another. This is why he believes his hallucination to be true; it is a sensory automatism which is excited by and expresses his unsound belief. If we could examine the mental condition and mode of working of such a mind, we would find that, owing to the perfect jumble of his ideas, he had ceased to be a free agent to control his conduct according to the law, although he literally knew the nature and quality of his act and that it was legally wrong. At any rate the juries, I believe, have generally acquitted or the government has been satisfied not to prosecute such persons on the ground of insanity.

Again, apply the law to impulsions, of which the following is an example in my own experience:[13] A woman was the subject of attacks of an intense impulse to kill the child of a sister, of whom she was very fond. This obsession extended until she had a desire to kill other children and was afraid to be left alone with them. When the impulse came over her, like Lady Macbeth, she saw knives and blood about her, if this happened to be the particular method which came into her mind at the moment. She was so afraid of giving way to the impulse that she sought protection against herself, and measures were taken never to leave her alone with children. It is true that this person did not commit homicide, but she might have done so. Although homicides from such impulses are rare, they occasionally occur. The case cited by Dr. Paul Garnier, of a butcher's wife who was driven to cut by a big knife the throats of her children playing in the shop, is an instance. "I am not mad," she explained; "I know quite well what I am saying and doing. I only don't know what is the matter with me; for the last three months I do not recognize myself. What is going on within me is too horrible to tell. I adore my children, and something says to me: 'You shall kill them!' The first time I felt a shiver which shook me from head to toe. I had the butcher's knife in my hand; my two children were near me amusing themselves. The idea to cut their throats seized me all at once. 'Kill them! Kill them!' cried out to me my criminal desire." "Can anything more dreadful be imagined," remarked Garnier and Colin,[14] and, it may be asked, would any juror convict such a person?

Minor criminal offenses, like stealing, known as kleptomania, are very common. The law certainly leaves all such cases entirely untouched.

The law does not touch the facts in certain paranoiac cases, of which that of P. H. C., reported by Dr. H. R.

11. Feuerbach: Remarkable Criminal Trial.
12. See Hysteria from the Point of View of Dissociated Personality, by Morton Prince, The Jour. of Abnormal Psychology, October, 1906.
13. Boston Medical and Surgical Journal, Jan. 21, 1897.
14. Tuke's Dictionary of Psychologic Medicine, vol. i, p. 596.
15. A Medicolegal Case of Well Poisoning, with a Plea for a Hospital Observation Law, by Henry R. Stedman, M.D., Proc. Am. Med.-Psychol. Assoc., 1904

Stedman,[15] is an example. The accused, "a well-educated, intelligent man," but a man of bad heredity, with an unstable paranoiac type of mind, was charged with poisoning a well with intent to cause the death of his sister, against whom he had intense feelings of animosity, without reasonable cause. The sister was trustee for his children for a small sum of money ($2,400), and his cause of complaint was that she would not give up the trust to himself, which he wished, not for the sake of the money, but for "the principle of the thing." He felt that he was under her "domination," her suzerainty; that she "had spoiled his life." He would willingly go to prison for life if it would end in her giving up the trust, etc. He believed there was a conspiracy or, at least, a community of interest between his sister and brother to "torment him and break down and ruin him." This idea, as he expressed it, absorbed all his being; it became his "religion," more than the life of his children. "She is my destiny, my evil genius," he said, and "it would not be wrong for me to kill her, but I will not say I would do it." The full account leaves no doubt of an insane mind, in consequence of which the accused was no longer a free agent and could not be held to be justly responsible. The court took this view and he was committed to an insane asylum without trial with the consent of the prosecution. The accused in this case undoubtedly knew the nature and quality of his act and that it was wrong in the legal sense, but that he ought not to be punished was not apparently questioned by the court or prosecution after his mental condition was determined.

There are numerous other states, such as certain cases of dementia, idiocy, fugues and dissociated personality, which the law, liberally interpreted, would not touch.

Should the knowledge required by the law be interpreted in a broad way, and if this is done will the formula "cover every case that ought to be covered by it"?

Mercier, after an elaborate examination of the psychology of responsibility, argues conclusively, as it appears to me, that not only must a broad interpretation be given to the language of the judges, but even then the test must be elaborated to cover conditions of mind which the language disregards. He proposes as a test a formula which I will later state.

Sir Fitz James Stephen, who is held by lawyers to be an authority of the highest rank as well as a learned judge, after an elaborate examination from a psychologic, a medical and a legal point of view, has insisted that the terms in which the law is expressed are too narrow, though he also thinks that the principle, if properly understood (that is, interpreted according to his views!), is sound. "I also think," he says, "that the principle which they [the judges] have laid down will be found, when properly understood and applied, to cover every case which ought to be covered by it. But the terms in which it is expressed are too narrow when taken in their most obvious and literal sense, and when the circumstances under which the principle was laid down are forgotten."[16]

In another place Stephen says: "I think that the answers in question are unfortunately expressed and imperfect. They do not explain that the knowledge that an act is wrong, which is the test, not of insanity, but responsibility—that is, liability of punishment—means not knowledge of the truth of the general proposition that a particular class of actions are wrong, but a power of appreciating the moral qualities of a particular action" (page 80).[17]

"By 'knowing either that an act is legal or that it is morally wrong,' I understand being able to judge calmly and reasonably of the moral or legal character of a proposed action; and that 'by controlling his own conduct' I mean able to refer calmly and reasonably to those motives which would lead men in general to resist temptation to crime and to allow proper weight to them" (page 79).

Certain it is that under a narrow construction even in the limited class of cases with delusions referred to in Questions 2 and 3 the law is not a sound test of what ought to constitute liability to punishment, for, under such a construction, Hadfield should have been hung and probably also McNaghten, as should also many other persons whom no jury would convict.

Whether or not the judges intended their words to be taken literally, I think that every one must agree that Justice Stephen's interpretation or something similar to it is that which ought to be put on them. But I also feel that the learned justice is hardly fair to the judges. He thinks that it was not intended by them that their word "know" should be taken in its literal and most obvious meaning. I do not wish to appear to dispute this view, but I must say that if it be correct the judges are placed in an unenviable position. To have deliberately left so important a matter open to doubt, and to be interpreted according to the personal attitude of succeeding judges, can, it seems to me, be justly characterized as culpable; particularly as the literal and obvious meaning leads to "monstrous consequences."

The words, too, it must be remembered, were expressly intended to be the terms in which the question of responsibility should be given to the jury, and it can hardly be thought that juries, like other laymen, would see in them any other meaning than that which is literal and obvious. To be sure, it is open to the judge to interpret their meaning for the jury, but I believe I am right in saying that it has not been the constant habit of different judges to understand and explain them in that broad and wise way in which Justice Stephen has viewed them, or in any uniform way. Indeed, I believe Stephen's views of the law are not generally accepted. Certainly in the Thaw trial I do not find that the formula of not knowing the nature and quality of the act, or that it was wrong, was laid down to the jury by Judge Fitzgerald in any but its obvious and literal meaning. If it had been laid down in the terms of Stephen it is difficult to see how the jury could have returned any other verdict than that of not guilty; or, if in the narrow way, of guilty.

For these and other reasons, I can not believe that the word "know" in law can have any settled technical meaning, as would be a layman's first supposition.

The extraordinary history of the present law proves that it is not safe to depend on the legal mind for a uniform interpretation, or on what has been called "judicial legislation" to determine what ought to constitute responsibility; for, as has been more than once pointed out, two at least of the answers of the judges were meant to apply to only a very limited group of insane people—a group which, if the word insane be properly interpreted, does not exist and never has existed, and the intention of the judges as to the application of the other two answers is at least in doubt; yet

16. History of the Criminal Law, p. 125.

17. General View of the Criminal Law. For an elaborate exposition of the same interpretation see History of the Criminal Law, pp. 163-175.

the legal mind by entirely overlooking this historical fact has applied the answers to every form of insanity. What could more cogently demonstrate the danger of judge-made law in matters requiring technical knowledge than the history of this law?

However broadly the language of the judges be interpreted, there is no question that those answers leave untouched many statements of facts of mental derangement which ought to be regarded as inducing irresponsibility. Stephen[18] points out that in confining themselves to the effect of disease on "knowledge" the effect on will and emotions was disregarded. I may here further point out that to base legal responsibility solely on the condition of knowledge, the will and the emotions, is to base it on theoretical and somewhat academic divisions of the mind which, though useful, are really abstractions. The academic character of these distinctions is shown by a study of certain clinical states which are brought about by disease and which make a person incapable of controlling his conduct so as to conform to the requirements of the law. In many such states it is impossible to say, so complex is the working of the mind, where the fault lies, whether in knowledge, will, emotions, desires or reasoning. I may cite, for instance, the obsessions, the impulsions and the fugues (epileptic and hysteric), including dissociated personality. In excluding all these, besides many delusional, paranoiac and other states, the answers of the judges were not exhaustive and some believe were not intended to be so. Nevertheless, as Mercier well points out, subsequent commentators and decisions have attempted to make them exhaustive by so broadly interpreting the meaning of the language of the answers that the King's English has become so stretched and perverted that one wonders whether hitherto he has had a real acquaintance with his own native tongue. How further can language be stretched than it is in saying, as has been said, that not to be able to control oneself means not to know the nature of one's acts and not to know that an act is wrong means not to be able to "judge calmly and reasonably of the moral or legal character of a proposed act."

Under these interpretations the learned Justice Stephen maintained that "if it is not it ought to be the law of England that no act is a crime if the person who does it is at the time when it is done prevented either by defective mental power or by any disease affecting his mind from controlling his own conduct, unless the absence of the power of control has been produced by his own default." He admits, however, that the law is capable of being construed to support the opposite conclusion. I do not find that the broad construction is always or even generally put on the law. Certainly it was not in the Thaw case, as I have already pointed out. There Judge Fitzgerald, in his charge to the jury, simply laid down the formula to the jury without attempt at interpretation or qualification. The jury were left, if they saw fit, to understand, as I should have understood if I had been one of the jurors, the word *know* as commonly used in common parlance and not in any technical sense. The jury was expressly charged, too, that the law did not recognize irresistible impulses. And yet in the same case one of the experts, as he has since told me, in giving his answer to the hypothetical question as to whether the defendant did or did not know the quality of his act, took the word in the broad sense, similar to that given to it by Justice Stephen. One thing is certain, that, unless a broad interpretation is given to the test formula, it must at times lead to monstrous consequences.

On the other hand, there is danger of erring too far on the other side and allowing, by too broad an interpretation, persons who should be justly responsible to escape what ought to be the consequences of these acts. If by "knowing" is meant the ability to "judge calmly and reasonably of the moral or legal character of a proposed act," it is questionable whether many psychasthenics, perverts, certain paranoiacs and others might not well come within the class of the not-knowing, and yet who could not be excused from liability to punishment without dangerously stretching the principle of irresponsibility. On this side, too, there is a vulnerable point in the present test which I have not seen alluded to, although I can not help thinking it must have been pointed out before.

The law says that "it must be clearly proved that at the time of committing the act the accused" did not know it was wrong. If these words are to be taken literally it is probable that very few insane persons know at this particular time their act to be wrong, though they have such a knowledge before and after. At that moment, particularly if the act is connected with a delusion, the insane mind is in such a condition of dissociation that no knowledge, i. e., no ideas beyond the very limited ones concerned in the specific action performed occupy the contracted field of his consciousness. The individual knows nothing or very little beyond what he is at the moment doing. For all else his mind is a blank, owing to a contraction of the field of consciousness. There is amnesia for all related knowledge and there is an absolute impossibility of synthesizing his dissociated memories and related ideas with the ideas which effect the specific act. So great is the dissociation that it is not uncommon for a person, after the committal of a crime, to have only a hazy, indistinct memory or none at all for his previous act. Cases of even sane persons are not uncommon where a crime performed in a moment of great excitement is followed by greater or less amnesia for the act. The emotion dissociates all but a fragment of a person's knowledge. In this respect, then, the law, if literally construed, is so broad as to exculpate many mentally deranged persons who might well be held to be responsible. It is hard to see how Thaw, for instance, if insane, could be convicted under this provision of the law. Is the law to be construed literally in one of its parts and freely in another, according to the case which it is desired to cover?

HOW SHOULD RESPONSIBILITY BE DETERMINED?

What practical procedure, then, have we to propose in order to determine responsibility? Within the short limits of an address of this kind I can only offer some general considerations.

In the first place, for reasons set forth in my opening remarks, the law should be statutory and the present test of common law discarded.

In the second place, when the defense of insanity is set up, the Maine system, which has been adopted by New Hampshire, Vermont and Massachusetts, would seem to be the most sensible procedure. The accused person is committed to an asylum to remain in the control of the court until it is determined by continuous observation under unbiased experts whether or not he is insane. If found insane, there would remain the question of responsibility. What should constitute irresponsibility and what should be the test? It is doubtful if under this procedure any formulated test would be

18. Stephen, History, p. 154.

required, for the way this plan would work out would, I believe, be found to be—indeed, I understand it has worked out, so far as tried, in this way: The accused having been found insane under a procedure brought by the public prosecutor, the latter in ninety-nine cases out of one hundred would be satisfied with the finding of this condition and would not further prosecute the case, supposing, of course, that sufficient safeguards to keep the insane person in confinement were provided for. The public prosecutor would recognize that, whereas the legal conception of insanity and legal irresponsibility are not synonymous terms, in the vast majority of cases insanity, as *medically* understood and classified, and moral irresponsibility are practically synonymous terms.

The controversy which has so long existed between the medical and legal profession over the responsibility of the insane will, I believe, if carefully analyzed be found to be largely due to the entirely different conceptions of insanity entertained by the two professions. The legal conception of insanity must be based entirely on book knowledge and has very little relation with the facts. The medical man's conception is that of the mental and physical behavior of the insane as actually observed and which can not be described so as to be appreciated by a person without practical experience. With these differences there naturally arises a difference in view.

But in the hundredth case where the accused would be found to be insane, under the procedure suggested, and where responsibility is questioned, what should be the test?

I doubt very much whether any single formula can be devised which will meet all the requirements, or at least I doubt whether any such formula can be devised which will be sufficiently simple to be presented to a jury of laymen and be understood. The formula proposed by Mercier may be as good as any; it is, "The actor must will the act; intend the harm; desire primarily his own gratification. Furthermore, the act must be unprovoked, and the actor must know and appreciate the circumstances in which the act is done," in order to incur responsibility by a harmful act. This seems to me somewhat complicated for the jury to thoroughly take in and is, furthermore, open to the same objection as the formula of the judges, in that a great deal depends on the interpretation of the term "know and appreciate the circumstances." I confess that I should not know myself exactly how this phrase should be interpreted, and it is probable that it would only follow the fate of the present formula and be interpreted in different ways by different judges.

I would submit for consideration whether, in the rare case in which the question of responsibility would be raised as to a person who had been judged insane after committal to an asylum for observation, the wisest procedure would not be to have the full observations of those who have carefully followed the case in the asylum presented to the jury. From these statements, which should include the presence or absence of hallucinations and delusions and obsessions, the condition of the will, the intellect, the emotions, the reasoning process and, in fact, a complete analysis of the mental condition, the jury could judge of the responsibility of the insane person without being limited by any legal formula. This, practically I believe, is what juries do to a large extent to-day, disregarding all formulas laid down by the court and deciding from what seems to them to be the merits of the case. Where the question of insanity, however, is determined not in an asylum by unbiased observers, but in court under the present thoroughly rotten system of expert testimony, the alleged facts as found are contradictory and trials are apt to result in disagreements or unsatisfactory verdicts.

An alternative procedure would be the adoption of the California law of responsibility combined with the New Hampshire method of determining insanity. By the California code insanity itself is an excuse for responsibility; that is, an insane person can not commit a crime. If the condition of insanity were determined, not in open court as a result of a battle between experts lined up on either side, but under observation in an asylum by experts appointed by the court, I believe it would be found that in a vast majority of cases those persons who were found to be clinically insane would be found to be also irresponsible by any formula which is soundly based on psychologic and psychiatric principles.

458 Beacon Street.

Original Articles

ALCOHOLIC INSANITIES.

A STUDY OF FOUR HUNDRED AND THIRTY-SEVEN CASES.*

ALFRED GORDON, M.D.
Associate in Nervous and Mental Diseases, Jefferson Medical College; Examiner of the Insane at the Philadelphia Hospital, etc.
PHILADELPHIA.

The subject of alcoholism is one of the most important. The pernicious influence that alcohol exercises on the individual's physical, intellectual and moral spheres of life shows that this poison presents a serious danger to society. Diametrically opposite views have been held as to the advisability of the use of a moderate amount of alcohol as a daily habit. The most recent researches of Reid Hunt[1] throw considerable light on the physiologic side of the question and show in the most conclusive manner that even extremely moderate amounts of alcohol may cause distinct changes in certain physiologic functions and that under certain circumstances these changes may be injurious to the body; certain physiologic processes even in moderate drinkers are distinctly different from those in abstainers.

Alcohol has a special predilection for the nervous system. We will not be concerned here with the pathologic changes produced by the poison in the nervous tissue or in its blood vessels, but exclusively with its effect on the mental processes of an acutely or chronically intoxicated individual. It is a well-established fact that alcohol produces insanity and that the latter presents constant general features, which, however, may undergo modifications in the course and in the intensity of the phenomena according to the individual and the nature of the beverage.

Alcoholism is not infrequently associated with preexisting mental affections. In order to determine the nature of the mental disorder produced by alcohol, it is important to make the observations on individuals with a normal mentality prior to the alcoholic ingestion. Alcoholism occurring in the course of mental affections acts as an excitant and renders the symptoms of the pri-

---

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. Hygienic Laboratory Bulletin No. 33 of the Public Health and Marine-Hospital Service, February, 1907.

mary affection more conspicuous. Sometimes, on the contrary, the toxic agent imposes its special delirium which becomes grafted on the pre-existing cerebral disturbance. In paretics, for example, by reason of their perverted faculties or of their delusions, all the degrees of an acute intoxication may be observed. In some cases alcohol in small quantities excites and stimulates the morlbid activity of the paretics; in others, in addition to the simple excitation, it creates illusions and hallucinations; in still others an attack of acute delirium will mask the physical and mental symptoms of paresis, and it becomes then somewhat difficult to appreciate properly one or the other. The alcoholic tremor may also mask the motor phenomena of paresis and the characteristic speech of the latter may lose its special features. In such conditions the diagnosis becomes obscure, especially when paresis is in its first period.

Epileptics are very unfavorably influenced by alcohol. In such cases one may observe the existence of two kinds of delirium: one that follows an epileptic attack and of which the individuals are totally unconscious, the other which they remember well; they can give a good account of their hallucinations and of their acts. The latter is frequently observed in alcoholism and, in fact, is typical of this intoxication. These two states, while they possess their own characteristic features, have an undoubted influence on each other; one aggravates the other. The medicolegal importance of this fact is too obvious to dwell on.

A tendency to excesses and especially to alcoholic excesses is not infrequently observed in paranoia. Here the intoxication aggravates the persecutory or other systematized delusions.

Association of alcoholism with senile dementia, although less frequent than with paretic dementia, is, however, not rare.

In all these instances, the diagnosis is sometimes surrounded with the difficulties. Nevertheless in the majority of cases close and more or less prolonged observations will enable us to disclose the primary affection superimposed or masked by the mental disturbances of the intoxicating nature.

In acute alcoholic intoxication complicating mental diseases, the delirium and hallucinations usually decrease rapidly and finally disappear; the toxic tremor becomes gradually less marked or disappears. In some cases, these phenomena may last a longer time and then we witness the curious combination of vague hallucinations or of vague persecutory ideas alongside of expansive delusive thoughts in paresis.

I mentioned above the very curious association of two kinds of delirium in epilepsy.

The senile dement not infrequently has attacks of agitation subsequently to an alcoholic excess. Here, again, the toxic phenomena disappear rapidly to lay bare the habitual symptoms of senile dementia.

If we turn our attention to alcoholic mental phenomena occurring in paranoia, we can see that the delusion of the original malady is, so to speak, stereotyped, it is fixed, it is by no means variable, the paranoiac who is being persecuted, poisoned, hypnotized or magnetized, is invariably the same object of his enemies' doings. In alcoholic delirium the delusional conceptions are characterized by mobility and variability. The hallucinations are of the same nature. All these symptoms disappear with the disappearance of the toxic attack, but the pre-existing paranoiac phenomena continue their monotonous evolution. Sometimes the toxic delusional thoughts with the hallucinations may persist for a longer period. Even then there will be no special obstacle in discriminating the symptoms of the primary affection and those of the added toxic condition.

The state of alcoholic intoxication naturally embraces two stages: one in which the symptoms are transitory, fugacious, and the other in which the disorder is profound, permanent and irremediable. The first presents two subvarities: In one of them the delirious symptoms are sudden in onset, but nevertheless not very pronounced; in the other the manifestations are very acute, usually occurring when the alcoholic abuse is frequently repeated, and constitute the so-called delirium tremens.

In chronic alcoholism, there is a long, slow, but progressive intoxication. Here the hallucinations leave after their disappearance delusional ideas, and the mental faculties in general present a certain degree of feebleness. While chronic alcoholism is not absolutely incurable, the usual ultimate result is dementia.

The not infrequent association of alcoholic intoxication with other mental affections had led some alienists to consider the latter as the result of the first. In fact, psychiatric literature is abundant with examples of so-called "alcoholic paranoia," "alcoholic mania," "alcoholic paresis," etc. Long ago these views appeared to me erroneous, and the more I studied the subject the more I became convinced of the untenability of this point of view.

SUMMARY OF CASES: FIRST HALF.

The present study, embracing 437 cases and covering a period of three years of close observation, mainly at the Philadelphia Hospital, but also in other institutions and in private practice, was undertaken with the object of determining the forms of mental disorders in acute and chronic intoxications of alcohol, also the possible justification of some writers in describing "alcoholic paranoia," mania, etc.

One hundred and sixty cases presented symptoms of acute alcoholism. The majority of them, viz., 120, presented the ordinary symptom of an acute toxic state, from which they recovered quite promptly, viz., within a period of from 3 to 8 days. They were all characterized by a marked confusion. In 80 cases there was also a stuporous condition besides a confusion. All presented a more or less mild delirium. Hallucinations and illusions were also present. The remaining 40 patients presented the well-known syndrome of delirium tremens. Except a few variations in regard to the intensity of the manifestations, they all exhibited disorders in their sensorium. Through their visual apparatus they saw before them terrifying animals, assassins, robbers; they witnessed the most horrible scenes, viewed executions, fires, etc. Through their auditory apparatus they heard threats, bad names, oaths, accusations against their honor and morality, groaning, complaints, screams, clattering of sharp instruments or firearms. Through their olfactory apparatus they perceived the most repugnant odors. Through the gustatory apparatus they tasted all sorts of nauseating substances. Finally, through the sense of touch, the patients believed themselves undergoing torture; they felt the blades of knives penetrating their flesh, they were being mutilated; they felt serpents, insects, worms devouring their bodies; or else they felt they were being drowned or thrown over precipices. Being under the influence of hallucinations they were excited, defended themselves, threatened, struck or else were terrified and lay immobile. These mental phenomena were accompanied by a tremor af-

fecting the hands, or the upper and lower extremities, or the latter and face. In some cases the tremor continued even in sleep.

The two categories of acute alcoholism observed by me in the 160 cases presented a good recovery. No sign of oncoming dementia was noticed by me when I saw them last. Some of the patients I had the opportunity to observe on subsequent occasions, viz., during second, third, fourth and fifth attacks. The mentality remained clear when they were discharged.

Before I dismiss this part of my study it may be of interest to mention that, while delirium tremens was observed mostly in men (28), the so-to-speak subacute alcoholism affected more frequently women (55) than men (25). As to the relation of the quantity of alcohol to the toxic symptoms there was no parallelism. In some cases, very small amounts of the beverage sometimes produced delirium tremens, while larger quantities produced in some cases the mild form of acute alcoholism. It is interesting to note, however, that in the majority of cases (not in all) women became more easily affected by the poison in small amounts than men. There is nothing definite to say as to the relative effect of beer and whisky, except that in the majority of cases large quantities of beer were identical in their influence to small quantities of whisky. It is difficult to establish this relative effect, as the majority of drinkers usually combine these two beverages.

SUMMARY OF CASES: SECOND HALF.

So far the results of the first half of my study presents no special features. They are, on a whole, similar to those obtained by other observers.

The more interesting is the second half, in which the investigations concern 277 cases of chronic alcoholism.

The mental disturbances of a chronic alcoholic nature may follow repeated subacute attacks or repeated attacks of delirium tremens, but they may also develop insiduously and progressively without preliminary acute symptoms. Before taking up the special features concerning the individual phenomena I will endeavor to present a general picture which I was able to draw from a wholesale observation of my 277 patients.

Intentionally I will refrain from describing the physical phenomena caused by chronic alcoholism, as, for example, the tremor, convulsive seizures, muscular weakness, sensory disturbances, gastrointestinal, respiratory and circulatory disturbances, etc.

The mental stage consists chiefly of a gradually developing intellectual feebleness, viz., dementia. Before the latter becomes conspicuous the patient begins to show undue irritability, which at first is noticeable only to the immediate surroundings. At the same time appears a weakness of the will power and of energy. The patient soon becomes depressed, his memory becomes clouded, the power of application for work, physical or cerebral, is decidedly impaired. The sadness, the realization of his physical and mental impotence lead him directly to delusive ideas, which become intensified by hallucinatory images and criminal tendencies are not infrequently observed. Gradually the moral sense, the sense of propriety, becomes deteriorated; conventional laws are totally ignored. The patient becomes indifferent, apathetic, brutal. His cerebral functions become irreparably disorganized, the judgment becomes infantile, and the patient's dementia is permanently established. The evolution, therefore, of chronic cerebral alcoholism is progressive and its ultimate result is terminal dementia.

Let us take up now the special symptoms as they presented themselves in my cases.

Delusions.—These were present only in 154 cases. The majority (111) were of persecutory character, decidedly unsystematized, sometimes extremely vague. At times they would disappear, but then reappear. They were either moderately or extremely mobile. Although the patient was invariably the object of the persecution, nevertheless the mode of the persecution changed frequently. At one time he was going to be put to death, at another time he was simply called bad names, at still another time he was the subject only of jealousy. Hypochondriacal delusions were rare (10 cases). There is a general belief that delusions of marital infidelity are very frequent in chronic alcoholism. I have observed them only in 29 cases.

As to the question of alcoholic mania, melancholia, paranoia or paresis, my 154 delusional cases show the following:

A. So-called Alcoholic Mania.—It is true that some patients out of the original 437 were first seen with agitation, with talkativeness, but none of them, I may say, presented the typical picture of true mania in which the confusional element is absent, but, on the contrary, mental lucidity is rather pronounced, and in which hallucinations are rare. The agitation in those cases was accompanied by a delirium; the hallucinations were terrifying. When a maniac, who is prone to commit excesses, drinks, he may develop hallucinations and a delirium, but the statement of the latter symptoms at the end of a few days will expose the primary affection. I made this observation in a number of instances. Cases that may have suggested acute mania or hypomania were observed by me in the subacute form and in the chronic form of cerebral alcoholism. In the latter case a recent ingestion of alcohol produced a mild acute delirious attack which was typical of toxicity.

B. So-called Alcoholic Melancholia.—In 5 out of the 111 cases with unsystematized delusions there was the element of the unpardonable sin so characteristic of melancholia, but a close observation showed that, while the patients would incessantly blame themselves for some imaginary misdeeds, nevertheless the other characteristic features of the malady were absent, as, for example, the painful emotional state, the depression following it. In 8 cases there was marked depression with persecutory delusions, but there was not the idea of self-blame, of physical worthlessness. In none of these 13 cases which suggest at first glance melancholia, was there the remotest tendency to self-destruction which is so frequent in melancholia. The depression in the above 8 cases was not a genuine painful sadness, but rather the result of the stuporous state which is so common in alcoholic intoxication.

C. So-called Alcoholic Paranoia.—Of the 154 delusional cases, 14 presented systematization. A close and prolonged study on repeated occasions showed that, while systematization existed at first, it became disorganized later. On the other hand, when a systematized delusion persisted for a longer period, there was at no moment the spirit of revenge with the tendency to homicide which is so characteristic of paranoia. In my first series of 160 cases of acute cerebral alcoholism I have not infrequently observed fixed systematized delusions with homicidal inclinations intensified by hallucinations, but they have never been persistent. Whether they were encountered in the acute or chronic forms, these delusive thoughts could easily be shattered by per-

sistent argumentation, which is not possible in true paranoia. Besides, the more or less delirious state and the facies of my patients aided considerably in eliciting the true nature of the affection. The evolution of paranoia as an essentially chronic mental affection developed on a conspicuous degenerative basis, which can be traced from early youth, is so characteristic that it is not an easy matter to confound it with a chronic cerebral alcoholism. The dementia in the latter is the most essential feature, and at that period of the disease when delusions develop the dementia is rather pronounced. In paranoia the degree of dementia during the period of delusional development is very mild.

D. So-called Alcoholic Paresis.—Among the 277 chronic cases, in 101 tremor was present, but it never was that fine fibrillary oscillation of the tongue and of hands that is characteristic by paresis. Pupillary inequality I observed in 52 cases, but with two exceptions I never noticed an irregularity of the pupils or marked disturbances of the eye reflexes for light or accommodation or of the consensual reflex. The speech was frequently tremulous because of a coarse tremor of the lips, but never was there present the characteristic paretic speech in which, as is well known, the guttural and labial letters are particularly affected. In 32 cases a marked expansive state was noticed, but in those none of the above-mentioned physical signs was present. Not one of the cases presented, I may say, the combination of the symptoms on which we usually base our diagnosis of paretic dementia. Some difficulty is experienced in cases of initial stage of paresis or in the depressive form of paresis, in which the expression of the facies resembles that slightly stuporous state of chronic alcoholism in which dementia is gradually developing and no distinct delusions are present. In such cases, close observation will always reveal mild physical signs in paresis, which will not be present in the form of alcoholic dementia I speak of.

At the beginning of this work I dwelt sufficiently on the value of the association of symptoms of acute intoxication with paresis.

My study of the several hundred cases, therefore, authorizes me to conclude that melancholia, mania, paranoia and paresis can not be the product of alcoholic intoxication, acute or chronic.

Other Features.—Let us turn our attention now to other features of my chronic cases. Simple dementia with delusions was present in 76 cases, and in some was accompanied by transitory hallucinations more of a religious nature. God and spirits figured in them continuously. The majority of these cases (58) never had an acute period. The patients were mostly business people, who drank moderately, but without interruption for years. The remaining number presented in previous life several attacks of subacute alcoholism or one or two of delirium tremens. The majority of hallucinations were of auditory nature (130). The same observation I made in the acute forms of alcoholism, although the relative percentage was not so high.

Age Incidence.—Interesting figures are found in regard to the age. The majority of my patients (129) with distinct dementia were between 30 and 40 years, a lesser number between 40 and 50 and still lesser above that age. In only one case marked dementia was noticed at 25. This observation is important. It seems that dementia develops early in life of chronic alcoholics, at an age when normal activity is at its height. This cerebral activity is, therefore, interrupted at a useful and prolific age. The duration of the use of alcohol has apparently no marked bearing on the date of the onset of chronic cerebral alcoholism. While it is true that the majority of these patients began the use of the poison at a very early age, there were a number of cases in which the dementia set in early. It seems that the individual predisposition is a very potent factor in early or late development of the symptoms.

Neuritis.—Multiple neuritis was observed in 7 chronic cases and in 3 acute cases. The latter presented a marked confusional state with inability to recognize place and time; there were also illusions of identity. The 3 patients recovered mentally, but the polyneuritic symptoms remained. The chronic cases presented the amnesic form of Korsakoff's psychosis, but there was also a more or less pronounced dementia.

CONCLUSIONS.

The present study establishes, I believe, this fact, that alcoholic insanity presents special characteristic features, which it is not difficult, in the majority of cases, to distinguish from other analogous conditions. Acute cerebral alcoholism presents three states: delirious, confusional and stuporous. The intensity of these states varies according to whether we deal with a subacute form or with delirium tremens.

The chronic form leads inevitably to dementia. In the course of development of the latter, delusions with hallucinations and illusions may and may not manifest themselves.

If the latter symptoms may sometimes present a picture of any other psychosis, this resemblance is only apparent, as in the majority of cases close observation will enable us to find the proper interpretation.

If the symptoms proper of cerebral alcoholism may sometimes develop in individuals affected with other psychoses, who happen to commit excesses or do so because of the perverted mode of thinking or feeling caused by the psychoses, it does not follow that alcohol is capable of producing these psychoses.

The conception of alcoholic melancholia, mania, paranoia or paresis is unscientific, as it is not based on accurate observations.

DISCUSSION.

DR. SMITH ELY JELLIFFE, New York City, said that the subject that Dr. Gordon presented is one of the most interesting and important in the whole field of psychiatry, since there is no single substance that is so widely used as alcohol, and no substance which in its use produces such widespread and manifold mental effects and leads to so much mental breakdown. He felt that Dr. Gordon has disposed of a number of straw men that the researches of the past ten years have already laid to rest, and that the modern point of view has been overlooked by Dr. Gordon in his study, important and interesting as it is. Thus, if he (Gordon) had followed the development of Kraepelin's ideas concerning manic depressive insanity, the entire problem of the differential diagnosis of alcoholic mania and a manic depressive psychosis presents no particular difficulties. Dr. Gordon's use of the term mania, in its old-fashioned and general sense, permits him to confuse conditions which are clearly defined by recent students of alcoholism. A like divergence of viewpoint permits of the confusion of paranoia in its strict sense with the chronic delusional state of alcoholics, in spite of Kraepelin's masterly studies in this paranoid complex. Dr. Gordon, he continued, is quite right in saying that alcoholism does not cause paranoia—i. e., if he will define paranoia—but that it brings about well-recognized paranoid states, which careful analysis only will show to be different from the paranoid states of other psychoses, seems to have been overlooked. The problem should have been posited in another manner, and Dr. Gordon's studies made more useful

if he would outline the differences, instead of saying they are different, which everybody knows. The same trend of thought is noticeable in his attitude toward paresis. Alcohol does not cause true paresis; alcoholic pseudoparesis is another thing. This is true, but, continued Dr. Jelliffe, what we want to know, and what a number of students have been trying to tell us is, how are we, from a clinical point of view, going to decide in the small number of cases where a differential is necessary? The paretic syndrome is so closely simulated in chronic alcoholism that the autopsy findings alone will clear up the difficulties—in a small number of cases it is true; but advance in diagnostic skill means the cracking of the hard nuts and not the finding of self-evident answers. Dr. Gordon is fortunate in being able to diagnose all of his cases of chronic alcoholism from true paresis. Kraepelin, Bonhoffer, Cramer, Ziehen, Bianchi and most psychiaters have said that in a small number of cases the autopsy alone will decide the question. Such has been Dr. Jelliffe's experience. Of late years the finding of the lymphocytes in the cerebrospinal fluid, the specific antibodies of Wassermann and Plant, etc., have aided in the diagnosis, but everywhere syphilis is a complicating factor, and cerebrospinal syphilis itself is not paresis. The problem which Dr. Gordon has stated is correct: paresis is not alcoholism; no one of standing says it is; but more clear symptom pictures are needed to guide us in the unraveling of the doubtful cases. These, it does not seem, Dr. Gordon has contributed. Another point of considerable forensic interest, said Dr. Jelliffe, is the effects of alcohol on superior degenerates or psychopathic inferiors, as Kraepelin terms them. Here the study of the development of paranoid complexes is highly demanded from the medicolegal side. That such individuals are more susceptible to alcohol is well known, and the tendencies to delusional developments are in need of more precise knowledge. Dr. Gordon said nothing of Korsakow's phenomenon, its discussion with pseudoparesis, Dr. Jelliffe thought, would seem to be necessary.

DR. F. X. DERCUM, Philadelphia, said that in his lectures on mental diseases he has adopted a point of view almost identical with that of Dr. Gordon. He has always held that the manifestations of alcohol were purely those of toxicity and must be distinguished from those of the purely degenerative psychopathies.

The differential diagnosis between paresis and alcoholism must be made by the physical signs. If there be a typical paretic speech, unequal and Argyll-Robertson pupils, tremor of lips and tongue, facial twitchings, etc., the case should be regarded as one of paresis. In making the differentiation, we should, of course, bear in mind the fact that alcoholism is not infrequently a complication of paresis, the paretic, now and then, drinking to excess. The same thing holds true with regard to paranoia. Alcohol bears no direct relations to paranoia. Occasionally, however, paranoiacs become alcoholics and the alcohol in turn hastens the mental degeneration and accentuates the paranoid symptoms, but alcohol does not, of itself, induce paranoia.

DR. ALFRED GORDON, Philadelphia, answering Dr. Jelliffe's question about the course of Korsakoff's psychoses, said he did not make a study of these psychoses in his cases, although he observed in some cases a typical course of these psychoses. They were practically all cases of acute alcoholism; in very few cases were there so-called fabrications. There was nothing especial about the confusional state or the delirious state. As to the effect of alcohol on certain degenerations, Dr. Gordon said that he had undertaken his study with one object in view, viz., to determine the effect of alcohol on the patients and to make an endeavor to differentiate between alcoholic mental states and other psychoses. Dr. Gordon always avoids using the term paranoia, or melancholia, or mania in association with other possible toxic conditions. He urged that every man should avoid the terms paranoia complex and alcoholic paranoia, etc. It is extremely confusing. Paranoia is a distinct malady, which has a special symptomatology, a special onset, and a special determination. We have no right to speak of secondary paranoia, alcoholic paranoia, if we want to be scientifically accurate. It is true, he said, that in some cases there is a difficulty in differentiating the alcoholic from the other paranoias, but if sufficient time is spent in the study of cases of this character the difficulty may be overcome.

Dr. Gordon's study of over 400 cases leads him to conclude that, while there are cases in which it is difficult to make a sharp, clear-cut diagnosis between the two conditions, in the majority of cases, the diagnosis is comparatively easy. In conclusion, Dr. Gordon emphasized that the paranoiac and the paretic may drink, but the alcohol has nothing to do (as a cause) with the mental symptoms or with the previous condition, except that it aggravates the pre-existing mental disturbances.

THE DISADVANTAGES OF LOW PROTEIDS IN INFANT FEEDING.*

ALFRED HAND, JR., M.D.
PHILADELPHIA.

It seems hardly necessary at the present time to bring up the subject of infant feeding, especially as there is nothing new in this communication, but it is only for the purpose of emphasizing a certain point which has, perhaps, not received sufficient attention.

The first statement usually made with regard to bottle feeding is that cow's milk, the best available substitute for mother's milk, is too high in its proteid content for the infant stomach to digest. In avoiding this feature, it seems as though there had been for a time a tendency to go to the other extreme and feed infants with mixtures that were too dilute.

This phase of infant feeding was impressed on me some years ago when I first began to direct the feeding of infants. In the considerable number of children passing through my dispensaries there were soon recognized four types of infants, for the saying that "a man is what he eats" is nowhere better illustrated than in infancy. These types were as follows:

1. The Normal Type.—The healthy, breast-fed infant, seen relatively infrequently, coming with some minor disorder from which recovery was prompt, and presenting the curved lines of beauty in the plump form, a pink glow of health, and a fat face bearing the heavy expression of contentment.

2. The Condensed Milk Type.—These infants appear fat, but are usually under weight, and sometimes thin; they are always rachitic and anemic, having a characteristic, bluish-white appearance like a delicate piece of china.

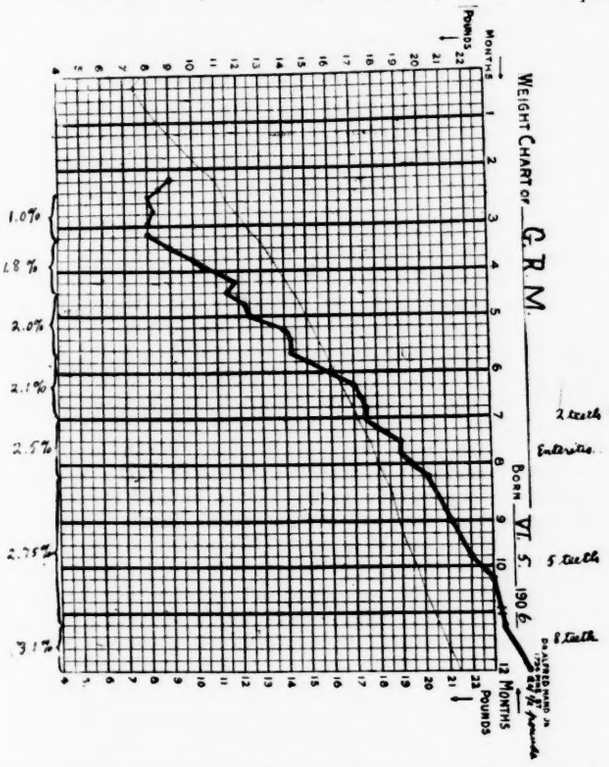
3. The Malnutrition Type.—It is perhaps too harsh to term this group the proprietary-food type, for there are many causes of marasmus, but the usual history was that one or more (several as a rule) of the proprietary foods had been used. This type comprised the greatest number, coming mainly for acute ileocolitis or simple indigestion, with more or less marked general atrophy, ranging from a little under weight to the extreme degree in which life is a constant burden.

4. The Cow's Milk Type.—While this group was the smallest in numbers, it was, nevertheless, distinct in its characteristics. The infants comprising this group were usually somewhat below the normal in weight, but in other respects they resembled breast-fed infants, although, with less adipose tissue, they seemed harder in flesh and more wiry; the color was always good; signs of rickets were inconspicuous; the teeth erupted normally; and the general resistance was good, as shown

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

by prompt recovery from whatever illness occasioned the visit. On questioning the mothers as to feeding, it was learned that cow's milk had been used with little, if any dilution—usually not more than a little lime-water in each bottle. Such cases were numerous enough to impress on me the value of high proteid percentages, provided, of course, that the infant can digest them; for it can not be too often repeated that each child must be studied separately, and not forced to take a certain mixture simply because another child has thrived on it.

The term "low proteids" is relative and arbitrary, and as used in this title is held to be any percentage below half of that present in whole cow's milk. If we accept the figures of some chemists that human milk contains 1.5 per cent. proteid, and cow's milk 3.6 per cent., then a dilution of half the full strength of cow's milk will be seen to contain .3 per cent. more proteid than good human milk. It is an axiom in the artificial feeding of infants that cow's milk is harder to digest than human milk; it would, therefore, seem that per



cent. for per cent. the former would yield less nourishment than the latter, and that consequently there is need of a higher percentage of proteid in artificial feeding than exists in human milk, in order that progress may be satisfactory. Practically, this has been borne out in my own experience in watching effects on development of percentages above and below the half-and-half line. It may be offered in objection to this idea that as cow's milk is harder to digest than human milk, the percentage in artificial feeding must be either below, or not above, that of human milk, or else the infant's digestion will have a great strain thrown on it. It would reply to this that just as the individual is supposed to have more lung capacity than he needs for his usual demands, so it is conceivable that the digestive powers have some reserve, and would be able to handle a proteid of 1.8 per cent. in cow's milk feeding, although they were intended by Nature and had only been accustomed to handle 1.5 per cent. in human milk. I find this to be so for the great majority of healthy infants, who can start off any time after two or three months of age on a mixture containing 1.8 per cent. proteid. There is another class comprising what have been called "difficult feeding cases," which is recruited largely from those who have been bottle fed from birth, or who have had recent gastroenteritis, the members of which are unable to handle such a percentage unaided. If these infants are kept on low percentages which they seem able to digest, certain disadvantages will frequently result, and be manifest in the behavior or development of the children.

These disadvantages which appear in varying frequency are: Constipation; failure to gain steadily in weight, or else the gain is at a very slow rate; fretfulness and poor sleeping habits; the development of rachitis in greater or less degree; the frequent appearance of curds in the stools; anemia; an increase in the natural liability to develop acute enteritis, and in the susceptibility to various infections; and sometimes very marked infantile atrophy. It may be said in passing that a vicious circle is established often, the inability to handle the proteid element and the general condition reacting on each other to the detriment of the infant.

There are two ways of handling such cases, quite different from each other; one may be called underfeeding; the other, for contrast, may be called sthenic feeding. The method of underfeeding aims to keep the proteid element at a low percentage, such as the digestive powers, which are below par, can handle by themselves, and percentages like the following are often given:

Per Cent.	Per Cent.	Per Cent.
Fat 2	Sugar.....7	Proteid.....0.75
Fat 2.5	Sugar.....7	Proteid.....0.90
Fat 3	Sugar.....7	Proteid.....1.0

The aim, which is a laudable one, is to avoid overtaxing the system, and have it gradually develop the power to handle stronger mixtures. We are sometimes compelled to resort to this method, but in my experience it is a slow, tedious process, and the upward climb is a hard one, and beset by the pitfalls mentioned above.

The method of sthenic feeding has as its aim so to modify the milk-mixtures that the infant will take those percentages which a normal infant of the corresponding age takes. These percentages may be broadly stated, thus:

Per Cent.	Per Cent.	Per Cent.	
Fat ..3.5	Sugar..7	Proteid..1.5	for first three months.
Fat ..4	Sugar..6	Proteid..1.8	for second three months.
Fat ..4	Sugar..6	Proteid..2.0	for third three months.
Fat ..4	Sugar..6	Proteid..3.0	for fourth three months.
Fat ..4	Sugar..5	Proteid..3.6	or whole milk early

in the second year. In my own practice, both private and hospital, I get better results by this method than by the former, although occasionally, much to my disappointment, I am compelled to give low proteid percentages.

It is but fitting to add that practically all of the infants whose feeding I direct receive clean milk, usually that receiving the certificates of the milk commission of the Philadelphia Pediatric Society, and that the mixtures are always made with a cereal decoction, such as barley-water. When it seems to be indicated, I do not hesitate to use predigested milk or to give either pepsin or pancreatin with the feeding, but it is never necessary to use these aids for any great length of time or in many cases. The average time is about two or three weeks. I have often been surprised to see infants whose digestive powers I had thought to be below par take and digest unaided, a stronger mixture when the former use of 1.5 per cent., 1.8 per cent. or 2 per cent. proteid had been attended with colic, presence of curds in stools, and failure to gain in weight.

The sample weight-chart exhibited is self-explanatory.

DISCUSSION.

DR. THOMAS S. SOUTHWORTH, New York City, said that he has been in the habit of referring to a portion of this subject as the subnutrition which occurs in children during the latter half of the first year, while Dr. Hand brought out the subnutrition which may occur from low proteids in the early half of the first year. In the early teaching, he said, it was represented that if one could get the child up to a formula of F., 4; S., 7; P., 2, at six months the child would run along comfortably for several months with 2 per cent. proteids. This fallacy crops out all the time, although there is an unquestionable demand by a normal child for increasing proteid, in order to secure proper muscular development. Certainly, after the seventh month, if the child's digestion is normal, the proteids should often rise higher than 2 per cent. (estimating the proteids of whole milk at 4 per cent.). Another cause of proteid subnutrition arises frequently in summer. The children are doing well when they go out of town. The parents continue during the summer months with the same formula with which they left the city, and there is timidity on the part of those who take up their feeding in the country in increasing the formula sufficiently. The result is they frequently come back below weight. It is possible in the summer to push up the proteids, even though the weather is warm. Dr. Southworth was glad to hear Dr. Hand say that in certain cases curds, or what are called curds, disappear with increased strength of the food. This, he said, requires careful discrimination to determine which cases may do that, but it certainly happens. He was glad also that Dr. Hand mentioned his use of a cereal diluent in feeding the higher proteids, because in discussing these matters it is necessary that one should understand just exactly what the other man does. The same results might not be obtained from an attempt to do it with a plain water diluent. A method often fails if the minor details are neglected.

DR. FRANK S. CHURCHILL, Chicago, expressed his surprise that Dr. Hand said nothing about the value of splitting the proteids. Of course, it is known that the proteid is a very complex substance, and that it varies in human milk and cow's milk. In human milk there is a large percentage of lact-albumin and a small percentage of caseinogen, whereas in cow's milk it is the reverse. This, he said, can be changed by feeding whey, and by using whey as a diluent in modified milk mixtures, feeding a baby proteid element in the shape of lact-albumin, which is easy of digestion, without increasing the more-difficult-to-digest caseinogen. If this were done it would not be necessary to use an aid to digestion. It is another step toward attempting to imitate the normal food of the baby.

DR. R. B. GILBERT, Louisville, referred to the use of milk from cows that are pregnant. Dairymen, he said, milk cows as long as they will give milk. The milk from a pregnant cow contains a large percentage of colostrum, and no matter how much pasteurization is given it, so long as that colostrum is in the milk, the baby is more or less sick. That is the difficulty of feeding a baby on one cow's milk. One-third of the cows in a dairy are pregnant, and one-third of the milk is affected. Dr. Gilbert urged that this always should be considered in the milk supply for the infant.

DR. A. C. MERCER, Syracuse, N. Y., passed around a powder which represents whey, and which, he thought, is as nearly perfect as such a product can be. About one heaping teaspoonful of the powder to an ounce of water makes whey of the average formula.

DR. JOHN L. MORSE, Boston, objected to the statement that a baby of a given age must have a certain percentage of proteid in its food. It is not the percentage of proteid, he said, that is of importance, but the total amount of proteid. This depends, moreover, more on the weight than on the age of the infant. A baby must have at least 2 grams of proteid per kilo in order to thrive and gain. It is not necessary to have more, although it is no disadvantage to have more, if the baby can digest it.

DR. CHARLES DOUGLAS, Detroit, considered the necessity for having enough proteid in the food to meet the necessities of growth as more important than the amount of fat. The children who have been fed one, two or three months in an imperfect way, either as breast or hand-fed children, more frequently demonstrate injury to the fat than to the proteid digesting power. There is no such thing, he said, as establishing a rule for a certain amount of proteid at a given age. Weight is the one thing that gives anything like a fair guide to the amount of proteid which a child requires. Whether one is able to give just that amount or not is always a problem in cases of difficult feeding. It is important to know whether a child has normal digestive power. In many infants the proteids, he said, can be pushed beyond where Dr. Hand has placed them, and they will take care of it. The problem with some children is to hold it down. The majority of infants are held down either by their defective natural powers, or by their acquired indigestion. What has most strongly impressed Dr. Douglas is the general writing about the difficulties of proteid feeding. They are not so great as one would be led to believe, if the amount given each and every day is adjusted to the ability of the child to digest it properly. If the physician increases each food continuously, so long as the child is comfortable, and there is absence of gaseous discharges, bad odors and liquid stools, he will find himself able to raise each article in the child's dietary up to its digestive ability and always obtain the best result.

DR. G. R. PISEK, New York, stated that, as a rule, the stool is examined at too respectful a distance. It may be reported as containing a great amount of curd or mucus. In fact, nurses innocently give incorrect reports of the character of the stools. Often the so-called curd is not found to be curd at all, but fat.

DR. J. W. VAN DERSLICE, Oak Park, Ill., has given higher proteids for the last three or four years than most physicians. He believes that one can feed high proteids with aid to the normal development, and that the child should be put early on whole milk; the nutrition will be better. It is essential to bear in mind the difference between therapeutic feeding and artificial feeding for a normal child. For a child fed on artificially prepared foods, the sooner it is placed on natural food, the better. He did not agree with Dr. Hand in holding off whole milk so long. In children under his care he has seldom found it necessary to postpone the use of whole milk after six months. This simply means that a normal child at six months of age can be given one or two feedings of pure cow's milk a day, if the breast is not giving enough. The addition of a little citrate of soda to the milk will be of advantage for the first few days. In the case of sick children, who have had one or more attacks of acute indigestion, he believes a point to be remembered is to feed in regard to the weight as against the age. A little, weazened-up, six-months-old baby that weighs a pound or two more than at birth, is not to be fed according to the amount given a baby of normal weight at six months. The musculature of the digestive tract is dilated, and this child should be fed with small amounts of high percentage food, rather than given a large amount of low percentage food at each feeding.

DR. ALFRED HAND, Philadelphia, agreed with Dr. Morse that one must not compel one child to take a mixture of certain percentages simply because another child had thrived on such an one, the moral being that each patient should be individualized; but nevertheless there must be some general plan of what a child at a certain age ought to take. Some times, Dr. Hand said, an infant can not tolerate high percentages. One striking instance of this case came under his observation some time ago. A prematurely born infant lost steadily in weight in spite of breast milk and modified cow's milk, in percentages ranging from 1 to 1.8. Peptonization was also used. At three and one-half months the child weighed four pounds and was finally *in extremis*, from which she was resuscitated by transfusion with normal saline solution. Then the use of whey was begun. In the next two months the child gained two pounds and seemed in a fair way to thrive. She was then taken to the country, where she succumbed to an enteritis. With regard to barley water, Dr. Hand's preference is for washed pearl barley, one tablespoonful to a pint—an easy proportion for the mother to remember—boiled until one-third has evaporated,

when the water is strained off and used as a diluent. For convenience, he some times allows the use of barley flour, one teaspoonful to a pint, but he does not deem this to be quite so good. Colostrum in cow's milk, he said, is an important point. It reminded him of the plea by a prominent Philadelphia dairyman to reward industry and patronize the prosperous dairyman rather than, through sympathy, the one with only a few cows. According to the logic of chance, a child would be much more apt to get colostrum with every feeding from, say, a dairy of five cows with one pregnant and all of the milk mixed together before bottling, than from a dairy of 100 or more cows, where from 5 per cent. to 10 per cent. are pregnant at a time. In the large dairies the milk from 15 or 20 cows is put through the bottler at one time, and unless the pregnant cows are evenly distributed through the stalls, a child taking milk from this dairy would stand a good chance of getting colostrum milk only occasionally.

PROPHYLAXIS IN EPIDEMIC CEREBROSPINAL MENINGITIS.*

A. SEIBERT, M.D.

Professor of Pediatrics, New York Polyclinic; Visiting Physician to St. Francis Hospital.

NEW YORK CITY.

Epidemic cerebrospinal meningitis is a communicable disease. Its cause, the *Meningococcus intracellularis*, although first described by Weichselbaum twenty years ago, was not generally recognized as such until the bacteriologic work of recent epidemics had been reported on.

Taking the epidemic of 1905 in the province of Upper Silesia in Germany as an example, described by Westenhoeffer,[1] we find that 3,102 persons were attacked and that 1,789 succumbed in this epidemic. During its course von Lingelsheim made over 3,000 tests at the bacteriologic station at Beuthen and found the meningococcus in the mucus taken from the nasopharynx in 93.8 per cent. of the patients.

This coincides with the finding of Councilman, Mallory and Wright in American epidemics. Ninety per cent. of the patients were children under 15 years of age.

In twenty-four healthy relatives of the patients Ostermann[2] found the meningococcus in the mucus taken from the nasopharynx seventeen times.

According to Kutscher[3] the meningococci do not colonize in the nose but in the pharynx, preferably the nasopharynx. By introducing meningococci into the spinal canal of monkeys Flexner[4] was able to produce inflammation of the meninges closely resembling cerebrospinal meningitis in man.

The biology of this organism is now well known. Outside of the human body it speedily succumbs to sunlight and desiccation. It grows but scantily in artificial culture media at 98 degrees and not at all at 70 degrees Fahrenheit. According to Flexner it dies rapidly when suspended in salt solution.

Flatten,[5] in his exhaustive report on the epidemic in the mining district of Oppeln in 1905, leaves no doubt that the meningococcus can survive in the warm moist atmosphere of the mines. We may thus summarize what we now know:

1. Epidemic cerebrospinal meningitis is communicable only by direct contact with fresh mucus from the nasopharynx of patients.

2. A person who has taken the germ from a patient may acquire meningitis.

3. Such a person may only acquire meningococcus pharyngitis and, thus acting as intermediary host, may carry this infection to others, near and far.

Kutscher,[6] a member of the Institute for Infectious Diseases in Berlin, in his article on "Practical Results Regarding the Etiology and Epidemiology of Cerebrospinal Meningitis," in closing his remarks, says: "It is necessary by all means to find a therapeutic remedy which will kill the meningococcus in the nasopharyngeal mucus." (In parentheses I would like to add here: "not alone in the mucus but also in the mucosa.")

Both Kutscher and Westenhoeffer state that gargling, spraying and pharyngeal swabbing have so far not succeeded in accomplishing this result. Jahle[7] alone claims that he has succeeded in removing the meningococci from the nasopharynx by the use of pyocyanase, a product of the *Bacillus pyocyaneus*. He promises to publish his method later on.

That the usual methods of disinfection, without destroying the organisms in the upper pharynx of all persons exposed to contact infection, can not prevent the spread of this disease is the unanimous opinion of those best able to judge.

Postnasal catarrh is one of the most common ailments among children. The removal of adenoids and of enlarged tonsils alone does not cure the catarrh. To accomplish this the organisms inhabiting the affected parts must be killed. The removal of the mucus and even an effective surface disinfection will not suffice, because it does not reach the bacteria lodging deep in the mucosa. Deep penetration of the disinfectant is, therefore, necessary to cure postnasal catarrh caused by meningococci or other bacteria.

During the last twelve years I have used a solution of equal parts of resorcin and alcohol to disinfect the nasopharynx. The alcohol must be heated before the resorcin is added. A plug of absorbent cotton wound around the end of an applicator, dipped into this solution, is introduced into the nasopharynx. Swabbing is not necessary. Two applications, one past each side of the uvula, are sufficient. The curved end of the applicator must be long enough to reach the ceiling of the nasopharynx. The cotton must be well soaked with the solution, but only so that dripping does not occur. The applicator must be bent so as to suit the length of the respective nasopharynx. After two seconds the cotton may be withdrawn. The stomach must be empty. The contractions of the soft palate instantly press the fluid out of the cotton and into every fold of the mucous membrane. The alcohol penetrates deep into the mucosa with the resorcin, and there destroys every organism it comes in contact with.

These applications are best repeated every forty-eight hours. Six treatments usually suffice to stop all secretions of postnasal mucus in a chronic case. In recent cases two applications in one sitting usually suffice. Infants one month old bear this treatment as well, and often better, than adults. Hundreds of cases treated solely in this manner have always given the desired result. The first application is usually felt during the next twenty-four hours, the later ones cause no inconvenience. The two cardinal symptoms of postnasal catarrh, namely, secretion of mucus and multiple swelling of the posterior cervical lymphnodes, usually disappear after three to six applications.

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. Berlin klin. Wochschr., No. 40, 1906.
2. Deutsch. med. Wochschr., No. 11, 1906.
3. Berlin klin. Wochschr., No. 41, 1906.
4. Journal of Exp. Medicine, March, 1907.
5. Flatten: Klinisches Yahrbuch, xv, 1906.
6. Deutsch. med. Wochschr., No. 46, 1906.
7. Münch. med. Wochschr., No. 29, 1906.

During the last seven years I have used this same treatment with good result in destroying streptococci in scarlatinous pharyngitis. Here the applications must be repeated from every four to twenty-four hours, according to the more or less advanced condition of the case. In bacillary diphtheria this local disinfection is, of course, not necessary.

During the last three years I have disinfected the pharynx in this manner after attacks of pneumonia, diphtheria, tonsillitis, influenza and measles to prevent early recurrence and transmission to others.

Although convinced of the efficacy of this throat disinfection for years, I thought best, before proposing it as a prophylactic measure in cerebrospinal meningitis, to have some bacteriologic tests made to substantiate the claim. Dr. Otto Hensel, pathologist to the German Hospital in New York, undertook this work. His report is as follows:

A certain, weighed amount of absorbent cotton was wound around the curved ends of metal applicators, sterilized in steam and dried aseptically. One of these sterile cotton plugs was then introduced into the posterior nasal space, care being taken that no other surface was touched. Withdrawn after two seconds, the cotton end of the applicator was then cut off with a sterile scissors and dropped into a tube containing 8 c.c. of sterile broth. Then an application with resorcin-alcohol was made to the nasopharynx, and after waiting from one to ten minutes, a third sterile application was introduced and the end again cut off and dropped into a second tube containing 8 c.c. of broth.

After an incubation of from sixteen to twenty-four hours at 37 C., three to eight loops of each tube were transferred to a tube of melted sterile agar and plated in the usual way. The colonies were counted with the low power after twenty-four hours, the average of ten squares being taken in every case. In a few instances the colonies were too numerous to count. Here the process was repeated with a smaller amount of broth. The result of the counts is found in the following table:

No.	Date.	Minutes elapsed between disinfection and second culture.	Average number of colonies per square before disinfection.	Average number of colonies per square after disinfection with resorcin alcohol.
1, 2	April 15	1	52	2
1, 4	April 16	1	30	11
5, 6	April 20	2	48	12
7, 8	April 22	5	60	42
9, 10	April 26	10	77	30
11, 12	April 27	5	55	45
13, 14	April 30	10	80	50
15, 16	May 9	1	50	8
17, 18	May 11	5	66	46
19, 20	May 20	1	77	15
21, 22	May 21	1	84	20
23, 24	May 22	1	32	4

On examining Dr. Hensel's table we find:

1. In every test the number of bacteria in the nasopharynx was materially diminished by the resorcin-alcohol.

2. In three tests this disinfection amounted almost to complete sterilization, leaving but 2, 4 and 8 colonies.

3. In four tests but 11, 12, 15 and 20 colonies were left.

4. In but four tests the reduction of the pharyngeal bacteria amounted to less than one-half of the previous number, evidently because the time between the disinfection and the taking of the second cultures amounted to five and ten minutes, while in the other tests but one minute had elapsed.

This proves that most of the bacteria found in the second cultures had entered the nasopharynx after the disinfection by the respiration.

In view of these results and the practical experience alluded to before, I feel justified in proposing this postnasal disinfection as a prophylactic measure in epidemic cerebrospinal meningitis.[8]

The resorcin-alcohol should be used:

1. In the nasopharynx of the patient to prevent further absorption as well as expectoration of meningococci.

2. In all persons coming in contact with a patient, especially when postnasal catarrh is present.

114 East Fifty-seventh Street.

DISCUSSION.

DR. F. S. CHURCHILL, Chicago, stated that recent investigations have shown that one must differentiate between the different forms of meningitis. The author alluded to meningococcic cerebrospinal meningitis and not to other forms. The studies of recent years have brought out an important fact—the great frequency of the meningococcus in the posterior nares, not only of patients, but of healthy people in contact with them. The frequency with which these are found in the posterior nares depends on the thoroughness of the technic. Von Lingelsheim states that of 635 cases investigated, 146 showed the meningococcus in the posterior nares—about 25 per cent. In his own 68 cases, studied by himself with great care, v. Lingelsheim found the meningococcus in every single one. He attributed failure in other cases to carelessness in technic, lapse of time before inoculating the media, and the character of the media. The coccus is extremely sensitive to cold, and in many cases it was 24 hours before the media was inoculated with the swab. Then he pointed out the fact that the meningococcus was found more frequently in the posterior nares than in the anterior. Finally, as to the character of the media von Lingelsheim recommends a mixture of bouillon and ascitic fluid from an abdominal or pleuritic effusion. The occurrence of the meningococcus in people living in a house where there is meningitis has been noted, and may be said to be present in 10 per cent. Dr. Churchill said that, while this may seem like a small proportion, the only thing to do is to isolate these cases, and the members of the family, because it is undoubtedly the latter who spread the epidemic. This, he thought, would apply only to cases of meningococcic meningitis, and not to cases of pneumococcic meningitis.

DR. ALFRED HAND, JR., Philadelphia, asked Dr. Seibert whether it has been definitely shown that the disease can be transmitted from one patient to another, and also whether the persons who harbor the meningococcus get it from patients with the disease or from some outside source. The teaching that although the disease occurs in epidemics, it is nevertheless not contagious, seems to be borne out by his experience and that of his colleagues. Many of these cases have been admitted to the wards, but there has never been a single instance of the development of the disease in the other patients. The board of health has recently adopted very stringent rules of quarantine which seem to be unnecessarily severe and not calculated to bring out the truth with regard to the prevention of the disease.

DR. D. E. ENGLISH, Milburn, N. J., asked how many disinfections are necessary to produce permanent protection.

DR. A. W. FAIRBANKS, Boston, Mass., emphasized, among the prophylactic measures, the care of slight eye infections. As evidence of this he cited a case of what was thought to be a slight catarrhal conjunctivitis. Vomiting, disinclination to play, inclination to sleep, and refusal of food, with rapid loss of flesh, in the next few days, alarmed both family and physician. When seen by Dr. Fairbanks, the child lay in stupor, but not unconscious, with extreme pallor, and emaciation, slightly retracted head, rigid neck muscles, retracted abdomen, tâche, rigidity of extremities, with increased reflexes, Kernig's sign, marked pain in the extremities, and tenderness on pressure along nerve trunks in the legs; bowels constipated; left eyelids swollen, with injected conjunctivæ, and profuse thin mucopurulent discharge. Five days later, a

8. See also: Seibert: Arch. of Pediatrics, August, 1901, and New York Med. Jour., Dec. 17, 1904.

profuse eruption of herpes appeared on the left side of the neck. Nothing whatever was being done for the eye. With energetic treatment, the eye infection cleared and slowly the other signs disappeared, but the child made an extremely slow convalescence.

DR. MYER SOLIS-COHEN, Philadelphia, said that the Board of Health of Philadelphia does not treat acute spinal meningitis the same as smallpox. It does not establish quarantine, but placards the house and excludes the children from school. The reason for this is that often two children in a family will have the disease. As assistant medical inspector, Dr. Solis-Cohen placarded five houses for cerebrospinal fever in the past ten weeks. In two houses there was more than one case. On investigating the cause for the disease he was unable to find any. In one house two children who contracted the disease had been playing about the dirt while the mother was cleaning the house into which they had moved recently and which they found in a filthy condition. In regard to the necessity of disinfecting the nose, it occurred to him that conditions might be the same as in diphtheria. In diphtheria by disinfecting throat and testing it bacteriologically a few minutes later, one may get a negative result; while in the course of 24 hours one may get a positive culture. In some cases the culture may be negative 24 hours after disinfecting the throat, and yet in another 24 hours the culture may be positive. That is why the city of Philadelphia requires two successive negative cultures before releasing a case of diphtheria. The question in such cases is, Do the germs come from the air or from the throat of the patient? When one culture gives a negative result, and another taken later gives a positive result, is the latter due to infection from the air, or to a few organisms left in the throat, or in the tonsillar crypts, and which later multiply?

MATERIA MEDICA AND PHARMACY IN HOSPITAL PRACTICE.*

M. I. WILBERT, PH.M.

Apothecary at the German Hospital, and Member of the Council on Pharmacy and Chemistry of the American Medical Association.

PHILADELPHIA.

The practice of pharmacy in American hospitals dates back to 1752, when Jonathan Roberts was duly appointed to preside over the recently established apothecary shop in the Pennsylvania Hospital at Philadelphia. This appointing of an apothecary by the managers of the Pennsylvania Hospital marks the introduction of the dispensing of prescriptions by other than the physician or his apprentice, and may, in fact, be considered as the beginning of pharmacy in this country.

The advantage and the importance of this branch of hospital work was further recognized in 1768 by the erection of a special building, or an "elaboratory," in which to prepare the medicines to be used in the treatment of the sick.

That the innovation of having prescriptions compounded by other than the physician or his apprentice had a beneficent influence on the medical staff connected with the hospital is perhaps best illustrated by the subsequent career of John Morgan, the second apothecary at the Pennsylvania Hospital and the father of medical schools in America.

Dr. Morgan was the first physician in this country to restrict himself to the practice of medicine and to have all of his prescriptions compounded by a regularly trained apothecary. He found but few followers until some time after the Revolutionary War, though two of his associates on the staff of the Pennsylvania Hospital, Drs. Jones and Chovet, are known to have refused to dispense their own medicines and also restricted themselves to the writing of prescriptions.

During the war of the Revolution the thoroughly well developed pharmaceutical departments of the military hospitals of our French allies were not without influence on the medical department of our own army. Without going into detail it may be pointed out that this is perhaps best illustrated by the fact that the army hospital pharmacist, or druggist, at the close of this war and until some time after the war of 1812, was on a better footing than he is now and that the first pharmacopeia, or book of formulas, to be published in this country was printed in connection with the military hospital at Lititz. As a further illustration of the influence of hospital pharmacy in the earlier periods, it may also be added that the immediate forerunner of our present Pharmacopeia was the Pharmacopeia of the New York Hospital, published in 1816.

The appreciation of the hospital pharmacist as a possible factor in the progress of the science of medicine appears to have been of comparatively short duration. At the Pennsylvania Hospital the position of apothecary early degenerated into a form of apprenticeship for medical students, and many of the positions in the drug departments of American hospitals have been used to acquire a knowledge of physic or to assist in defraying the necessary expenses of a course in medicine.

Being so largely used as a stepping stone to a position that was thought to be more advantageous and desirable, there is little wonder that hospital pharmacy in America never attained the recognition or the development to which it has reached in France, or even in Great Britain.

In the one hundred and fifty years of the practice of pharmacy in American hospitals we can only point to one hospital pharmacist who idealized his position and was able to accomplish something that we of to-day may rightfully point to with pride.

This man, the late Charles Rice, was connected with the drug department of Bellevue Hospital, New York, for over forty years, and for more than twenty years was the chairman of the Committee on Revision of the Pharmacopeia of the United States. It is fair to add that he was the one man above all others who was instrumental in converting that book from a mediocre enumeration of drugs and medicines into a truly representative pharmacopeia that is, even now, more thoroughly appreciated and admired abroad than at home.

With this single though illustrious exception, the field is indeed barren, but the bleakness of it all becomes even more apparent when we consider what might have been accomplished to aid in the progress of medicine, and what the want of practical pharmacy in our leading hospitals is really responsible for. As a suggestion of what might be done it may be permissible to point out that the special report on "Benevolent Institutions," published by the Bureau of the Census in 1905, states that on the first day of that year there were in the United States no less than 1,493 hospitals and 156 dispensaries, dependent largely on the subsidies from public funds or on the charity of private individuals and thus virtually public institutions.

On this same date there were under treatment 71,530 patients, and in the calendar year immediately preceding no less than 1,064,512 patients had been treated, at an estimated cost of over $30,000,000. An even greater number of persons 1,611,651, were treated in

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

the public dispensaries, making a total of no less than 2,676,163 charity patients.

If each one of these persons were counted but once, and fortunately they are not, more than 3 per cent. of the total population of the United States would have been the object of a greater or lesser degree of charity during this one year.

Of the 1,649 institutions enumerated in this report of the Bureau of the Census no less than 350 should, and probably more than this number do, employ a pharmacist or person to prepare and dispense the medicines that are used. These figures when compared with the absence of any available evidence of scientific work done in the pharmaceutical departments of even the larger and more influential hospitals need no further comment.

That there is need for a radical change in this connection is perhaps best illustrated by the work that modern hospitals essay to do and the practices that are really followed.

With the introduction of laboratory instruction in the American medical colleges, and with the accompanying appreciation of the advantage of practical over purely theoretical knowledge, there has come a deeper appreciation of the possibilities of hospital experience as a factor in the preliminary training of future physicians. One of the marked shortcomings of practical experience in hospitals manifests itself when we remember that the impressions obtained by students or young practitioners are likely to have an important influence on their future thoughts and ideas.

We not infrequently hear the assertion that the practice of medicine is more than drug giving, and, while this assertion is generally accepted as true, there appears to be a peculiar lack of appreciation of this truism on the part of physicians themselves, and the present day training in the average hospital is certainly not conducive to a true comprehension of the uses or of the limitation of medicines.

On the one hand, we have the ultra restrictions of the hospital formulary, with a limited number of antiquated and more or less complex recipes that are made to fit all cases that present themselves. These recipes are not infrequently numbered or lettered to correspond with the number or letter on a stock bottle in the ward medicine closet. This system is further simplified in the outpatient department of at least one, otherwise admittedly excellent, institution, where the physician is directed to write the number of the recipe and the dose that is to be taken on a special form, and this is subsequently pasted on the vial of medicine that is handed to the patient, thus reducing the necessary thought and labor to a minimum and making the treatment of the patient all but mechanical.

It is needless to add that practices of this kind are distinctly harmful and contribute nothing to either the progress of medicine or the advancement of the individuals directly interested. This is but one of the numerous variations of the practice of pharmacy in American hospitals, and is by no means the worst.

A much more serious proposition is to be found in the dispensing of ready-made pharmaceutical preparations by ignorant and incompetent persons. This is perhaps a phase of the present-day practice of pharmacy that had best be gone over in silence, though all of you have read of, and some of you know of, perhaps added instances in which so-called dispensing tablets of atropin or strychnin were administered for the dose tablets that were intended. The responsibility for accidents of this kind will, eventually at least, be placed on the medical attendants of the hospital, who are morally responsible for the lives of the patients entrusted to their care and should know of the competence or the ability of persons in charge of the dispensing of potent drugs.

There is still another phase of the abuse growing out of the lack of appreciation of practical pharmacy in American hospitals that is not alone interesting but of tremendously far-reaching importance. This is the use of nostrums and the all too liberal giving of testimonials. Such evidently objectionable preparations like "Burnham's Soluble Iodin," "Waterbury's Metabolized Cod Liver Oil," "Duffy's Malt Whisky," "Ammonol," "Electrozone" and a host of others have been able to secure testimonials from physicians who are officially connected with some of the leading hospitals of this country, and the manufacturers have in turn used these testimonials to dupe countless thousands of other physicians, and not a few of the laity, into believing that these testimonials represent painstaking, scientific observations and that the preparations were not, if used at all, doled out promiscuously, like hospital mixtures, and the conclusions arrived at on absolutely insufficient evidence.

Those of you who know of the composition of "Burnham's Soluble Iodin" will probably appreciate the sarcasm in the title of the little booklet called "A Few Clinical Reports from New York Hospitals," and all of you must be sensible to the shameful reflections on medical institutions that are embodied in the four-page circular consisting of a list of "A few of the prominent institutions where Waterbury's Metabolized Cod Liver Oil Comp. is making a world-wide reputation."

These are but two of a host of nostrums that are being advertised as having achieved wonderful results in hospital practice. As an illustration of the degree of force that is sometimes applied to clinical reports to make them fit in with the views of the nostrum exploiter it is but necessary to call your attention to some of the advertising material recently put out by the manufacturer or the agent of "Pepto Mangan (Gude)."

The first of these to be exposed is the deliberate garbling of the "Report of the Commission for the Study and Treatment of Anemia in Porto Rico."[1] A more recent illustration is THE JOURNAL'S[2] critical discussion of a report by Dr. Mateo M. Guillen, a former house physician at the Infants' Hospital, Randall's Island, New York. This report is so evidently manufactured that it strongly suggests the use of some other incentive than the desire to compile a scientifically valuable report of clinical observations.

Those of you who know of the direct and implied offers that are frequently made to hospital internes for clinical reports of this kind will appreciate the general good sense and the strength of character of these young men, as evidenced in the fact that these doubtful or even fictitious reports are not more frequent than they really are.

Many of you, particularly those who are connected with hospital clinics and medical colleges, know that manufacturers of proprietary medicines not infrequently offer a very fair remuneration for work of this kind, in addition to supplying practically unlimited quantities of their preparation for experimental purposes. It is perhaps needless to add that it would require an individual of particularly strong character to willingly

1. THE JOURNAL A. M. A., Sept. 16, 1905, p. 934.
2. THE JOURNAL A. M. A., April 6, 1907, xlviii, p. 1197.

forego the expected remuneration for a clinical report and unhesitatingly denounce a preparation that he had been experimenting with.

Rational experiments in therapy and the careful study of the sciences underlying the treatment of disease are recognized as being among the more evident duties in connection with hospital work. In this connection it is fair to suppose that legitimate experimentation with drugs is by no means the least important part of this duty. It is generally conceded that under no conditions can drug action on the human body be more advantageously observed than in the wards of a well equipped hospital under the constant supervision of trained persons. If these experiments are to be of scientific value, however, they must be made absolutely independent from any possible influence of a monetary consideration for the work done, the chemic as well as the pharmacologic properties of the materials used must be thoroughly well known and their identity and relationship to other known substances thoroughly well established.

To be of value experiments of this kind must be conducted under the direct supervision of competent and well trained persons and the results, particularly if unfavorable, should be given prompt and proper publicity as a warning to others engaged in observing the action of the same materials.

It is in this particular field of hospital work, and largely in the capacity of an adviser on the chemistry or the pharmacy of remedies, that the hospital pharmacist can be, and very properly should be, of greatest service. With the ever growing number of studies that are imposed on the medical student there is little or no time to be devoted to the study of details of pharmaceutical technic, and unless the young graduate is given an opportunity to familiarize himself with the possibilities of modern pharmacy during his hospital career he surely will, as many of them do, fall an easy prey to the detail man of the nostrum-maker.

The influence of a thoroughly well equipped and efficiently conducted pharmacy on the medical house officers and on the medical students attending ward classes, in hospitals devoted at least in part to the teaching of medicine, must necessarily be of importance and an educational factor of some moment. With the further development of this particular field of usefulness for the hospital apothecary it is not at all improbable that in future years we may have the introduction of a specially trained class of pharmacists to take up and further develop this particular line of pharmaceutical work.

In conclusion, let me venture the assertion that if every active hospital of a hundred or more beds employed a pharmacist having the necessary preliminary training and the inclination for active work, the science of pharmacy and with it all branches of the science of medicine would make much more rapid progress, proprietary medicines would soon be appreciated at their proper value, and the practice of medicine would thus be relieved of one of the most disgraceful blights of the present time.

DISCUSSION.

DR. W. J. ROBINSON, New York City, paid a glowing tribute to Charles Rice, who, in his opinion, was not only an ideal pharmacist, one of the greatest pharmacists that America ever had, but one of its greatest men, and with all that he was extremely modest and unassuming. He was devoted to pharmacy as few men have been; his entire life was in it. He did not care for any remuneration. His one object in life was to raise pharmacy to the highest standard possible. It was a great misfortune that death took him away at a comparatively early age, because he is responsible, Dr. Robinson said, more than perhaps any one man, for what the U. S. Pharmacopeia is today.

In reference to soluble iodin, Dr. Robinson claimed to have been the first to expose that remedy, which claimed to be a new process of rendering iodin soluble and miscible in water without containing any iodid or alcohol. But, he said, the manufacturers forgot to say that they used a little hydriodic acid to render it soluble and miscible with water.

DR. WILLIAM ROBINSON, Philadelphia, referring to the responsibility assumed in publishing these recommendations from individuals, institutions and hospitals, said that some twenty-five years ago St. Jacob's oil was very much exploited. It was a common thing for the daily papers to come out with columns of advertisements, giving testimonials with the names of prominent people attached. The thing became so intolerable that finally the clergymen, at one of their meetings, elected to have some one prosecute the firm for what they claimed was a libel, using a name without the owner's consent. The case came to trial in due course, the attorney for the defendants, much to the surprise of the other side, said: "It is not necessary to have a jury; we plead guilty as far as using the gentleman's name without his consent is concerned, and the gentleman will please prove what damage he has received as a result of this publication." The clergyman was placed on the stand and he was absolutely helpless; he could give no evidence that he had been damaged in reputation or pocketbook by the publication of his name. Often the hospital is injured by some interne, or some one who has had some official connection with it, bringing disparagement on the hospital as a consequence. Dr. Robinson cited an instance in Philadelphia, where a physician published his name in a testimonial for a syphilitic cure and gave the Marine Hospital as the one he was connected with, whereas it happened he had only a temporary connection with that institution, some thirty or forty years before.

DR. ROBERT A. HATCHER, New York City, recalled the Dr. Mateo M. Guillen episode. Guillen was the house surgeon at Randall's Island and Dr. Stovall suggested that they carry out some studies on iron in anemia. They did so. The first thing Dr. Stovall knew that circular was in print as an advertisement, and Dr. Mateo M. Guillen was in South America.

DR. C. B. LOWE, Germantown, Pa., said that Dr. Osborne referred to the fact that at the New Haven Hospital the students knew less when they came out of the hospital than when they entered, simply from the fact that remedies were prescribed merely from numbers. It would take more time but would give a better knowledge of material medica if the prescription could be written out in each case. Dr. Lowe thought that if that could be done day by day it would be a means of education. They learn absolutely nothing from ordering so many ounces of No. 12, three times a day. It means nothing to them. It might as well be written in Hebrew or Greek. If they could learn prescription writing, they would gain a great deal. Many young physicians, he said, are painfully ignorant of it.

DR. OLIVER T. OSBORNE, New Haven, Conn., said, in explanation, that his statement applied not alone to the New Haven Hospital, but to students in all sorts of hospitals out west, south, east and north, and Dr. Osborne has come in contact with men who have been in hospitals and show a woeful lack of knowledge of prescription writing. Junior students, he said, write better prescriptions than the seniors, and the seniors better than hospital graduates. There is a progressive deterioration as the student remains in the hospital. When the students come into contact with clinical work in dispensaries they do not always apply the personal equation to the patient. In other words, men beginning to practice medicine may become splendid surgeons, they may be able to treat certain kinds of internal disease, but in private practice they must go to work and study their therapy all over, and while they are doing that, they often take up with the first proprietary that comes in. Dr. Osborne heartily agreed with Mr. Wilbert and hoped the hospitals would take note of this matter and give more attention to remedying this evil.

DR. C. B. LOWE, Germantown, Pa., said that he did not wish to bring any reflection on the New Haven Hospital, and as Dr. Osborne qualified his statement, he would like to amend his own by saying the New Haven Hospital and others.

DR. HENRY R. SLACK, LaGrange, Ga., twelve years ago spent some time visiting hospitals and investigating their methods. The internes, the hospital men, were all bright young fellows who spent an hour or two making careful diagnoses by blood counts, analysis of urine, etc., but they did not know what to prescribe. The chiefs, on having their attention called to this state of affairs, said they did not have time to write prescriptions. Dr. Slack found that true in Philadelphia, in Baltimore and in Chicago. That, he said, is the seed, the germ from which these proprietary remedies spring. Bright men pass examinations, take positions as internes and yet they do not know what medicines they are prescribing. The average graduate when he begins to practice snaps up the first proprietary that comes along as a fish does bait. That is the reason the proprietary men have such a rich field. Dr. Slack urged that we teach the young members of the profession to write prescriptions, know what medicines they are using, and not depend on some one else to furnish prepared panaceas for all the ills to which flesh is heir.

INTRAVENOUS TREATMENT OF SYPHILIS.

G. FRANK LYDSTON, M.D.

Professor of Genito-Urinary Surgery and Syphilology, Medical Department of State University of Illinois; Surgeon to the Lakeside Hospital.

CHICAGO.

My clinical experience with the intravenous injection of mercury in syphilis is as yet limited. I nevertheless feel warranted in presenting that experience to the profession. I confess that it was with some hesitancy that I adopted the method. I have, however, been pleased with my experience thus far. I herewith submit a report of ten cases in which I have used the intravenous injection with mercuric chlorid. It will be understood that I do not claim that the intravenous method was the only one available in all these cases, nor am I yet in a position to assert that it should be used as a routine practice. In several, however, it was a most valuable therapeutic resource, and in all of them its action was superior to that of any other method in my experience. In "malignant" cases and lesions that seriously menace the integrity of the nervous system or viscera, intravenous injections would appear to afford a safe and sure method of relief. The speedy mercurialization of the blood with consequent prompt systemic effect of the drug, the relatively large doses permitted, the freedom from the painful effects of subcutaneous and intramuscular injections, and in general the absence of gastrointestinal disturbances, especially commend the intravenous treatment. Judging from the small series of cases herewith appended, bowel irritation is exceptional from the use of large doses of mercury intravenously. There is apparently no tendency to sudden severe salivation from the intravenous use of large doses of the drug, although the mouth reacts promptly in some cases.

CASE 1.—A woman, 30 years of age, in the beginning of the third year of typic secondary syphilis. Pains in the limbs, lowered tendon reflexes, and a sensation of numbness and heaviness of the limbs were complained of at the time I was first consulted, and the patient stated that she had had these symptoms for several weeks. There were no other symptoms suggestive of ataxia. There was a slight apparent loss of muscular power over the lower extremities. I put the patient immediately on intramuscular injections of succinamid, but she proved intolerant of them, the pain being so severe that I was compelled to discontinue their use. Inunctions produced a severe dermatitis, and mercury internally resulted in severe gastrointestinal irritation, the stomach becoming so sensitive that I was compelled to discontinue medication by the mouth. The indications for radical treatment being urgent, I resolved to try the intravenous injections, giving 25 minims of a 1 per cent. solution at a single daily injection for two weeks. Improvement was noted after the third injection, and the cord symptoms entirely disappeared at the end of ten days. The emergency having apparently passed, and the stomach being again tolerant of drugs, I stopped the intravenous injections and put the patient on the routine administration of protiodid.

CASE 2.—Woman, 23 years of age, with a gummy ulcer of the right ala nasi. Aside from this single tertiary manifestation of the disease, no lesions had been noticed for several years. The nasal ulcer proved very resistant to treatment. It yielded slowly, and when cicatrization had been complete for a few days, the lesion suddenly, without a warning, would recur. Mercury and iodid pushed to the point of tolerance had yielded only temporary benefit. The patient was a large, well-nourished woman, and I began with fifteen drops daily of a 2 per cent. solution of bichlorid. The curative effect of the method was very quickly noted. The ulcer healed soundly within ten days and has remained healed for over a month, during which time the injections have been given twice weekly.

CASE 3.—Young man, 33 years of age. This was a rather unusual case, being one of chancre of the tonsil. The primary lesion was associated with an enormous cervical adenopathy on the left or corresponding side. The faucial inflammation was very marked. Mercury given by inunction and by mouth acted extremely slowly in this case, and as deglutition was very painful, the patient complained very bitterly of his condition. I began intravenous injections of bichlorid in a dosage of 15 minims of a 2 per cent. solution. I did not go beyond the dosage for the reason that I was apprehensive that the large amount of mercury that had already been given in the ordinary way might suddenly take effect and in combination with the intravenous dosage produce disastrous results. Within four or five days after beginning the intravenous injections marked improvement was noticeable, and resolution of the primary lesion and of the bubo in the neck went on very rapidly.

The physiologic effects of the mercury were manifest on the tenth day, and the treatment was discontinued. The improvement, however, went steadily on, and at the end of three weeks the patient was in a very satisfactory condition.

CASE 4.—Patient, a man, 35 years of age, had been under my treatment for syphilis for about five years, the case being a very stubborn, protracted one. Various lesions had appeared from time to time, and had healed only after very large doses of mercury and iodid, long-continued. The patient had been under tonic doses of mercury constantly for a period of six months, during which he had been apparently well. He suddenly reappeared, however, for advice, presenting a gumma of the soft palate. This softened, broke down, and perforated within forty-eight hours. It appeared so malignant that I resolved not to rely on antisyphilitic remedies administered in the ordinary manner, and therefore put the patient on intravenous injections, using 20 minims of bichlorid, 2 per cent., daily. Marked improvement was manifest at the time the third injection was given. A permanent fistula will undoubtedly result in this case, but the destruction of tissue was speedily checked and the process limited to an area very much smaller, in my opinion, than would have been the case with any method of treatment other than the intravenous.

CASE 5.—Woman, 40 years of age, under treatment for locomotor ataxia undoubtedly of syphilitic origin. This case was very difficult of management because of the intolerance of the stomach for mercurials and iodids, and the extreme irritability of the skin, which practically prohibited inunction treatment. Some improvement in the symptoms was noted soon after the routine administration of mercury, but exacerbations of severe pain in the lower extremities continued to be a frequent and annoying symptom, and as it was impossible to continue the treatment for any length of time, the case was especially trying. Intravenous injections of ¼ grain doses of bichlorid of mercury produced rapid improvement. The patient is now

taking the injections twice a week, and the case is apparently under control.

CASE 6.—Man, 45 years of age, suffering with a severe and obstinate cephalalgia of syphilitic origin. Mercury and the iodids were pushed to the point of tolerance, with but slight relief. I substituted the intravenous injections, administering bichlorid in half grain doses daily for one week. Relief was immediate. At the end of the week the headache had disappeared entirely. Injections are now given semiweekly.

CASE 7.—Man, 50 years of age, whom I had treated for syphilis twenty years before, reported to me suffering with nocturnal headaches and cerebral symptoms which were decidedly suggestive of an incipient paresis. Lack of concentration and suspicion were noted, and the impairment of his psychic faculties had given rise to considerable alarm on the part of his friends. Gastric irritation and constipation were prominent symptoms, and the evident presence of autointoxication as a complication gave the case a much more favorable aspect than it would otherwise have possessed. The patient absolutely refused to submit to inunctions, and as the stomach proved intolerant of mercury and the iodids I resolved to try the intravenous method. Restoration of the bowel function was first attempted, with gratifying results, the mental symptoms improving markedly within a few days. The headaches, however, continued. Daily intravenous injections of ¼ of a grain of bichlorid were then begun. The headaches began to improve within three or four days after beginning the treatment, and within two weeks had entirely disappeared. For six weeks, during which time the patient has been taking no treatment, he has remained apparently well. He will not submit to steady treatment, but has promised to take a course of intravenous injections several times yearly.

CASE 8.—A delicate woman, 28 years of age, without a previous history of syphilis, presented herself with two painful nodes on the right tibia. Nocturnal pains were very severe, necessitating administration of morphin by her previous medical adviser. She had been given small doses of mercury and iodid of potassium without effect; large doses were not tolerated. The patient was put on daily ⅛ grain intravenous doses of the bichlorid, with the result that within a few days the osteocopic pains ceased and the nodes markedly diminished in size. Slight permanent thickening of the bone at the affected points, however, resulted. This patient is now taking semiweekly intravenous injections of ⅛ grain of the bichlorid, and is apparently doing well.

CASE 9.—A patient, whom I thoroughly treated for syphilis fifteen years before, reported, complaining of severe pain in the tibiæ of some six weeks' duration. The pain was especially marked at night. Examination showed a diffuse periostitis over both tibiæ, with slight thickening of the membranes, some edema and exquisite tenderness on pressure. I at once began the intravenous injection of bichlorid, in ½ grain doses. When the patient reported for the second daily injection, he stated that the bone pains had disappeared within three or four hours after the first treatment. Within five days, during which time the intravenous treatment was given daily, the tenderness of the tibiæ entirely disappeared. On the sixth day I began intermitting the treatment because of slight ulceration, evidently of mercurial origin, of the mucous membranes of the cheeks. It is now five weeks since the systematic daily treatment was suspended, during which time injections have been given twice weekly, and there has been no recurrence of the pain in the limbs, and no disagreeable effects from the drug.

CASE 10.—Physician, 40 years of age, reported with a chancre of the right finger, with a well-marked typic secondary papular syphilide. Time being an important consideration to the patient, intravenous injections of ¼ grain doses of bichlorid were immediately begun. Improvement was manifest within three days, the obscure bone pains with which the patient had been suffering having disappeared, and the eruption having already begun to fade. The intravenous injections were continued for ten days, and, the case being apparently under perfect control, were replaced by inunctions. The patient is still under treatment, and doing well. He has had considerable experience in the management of syphilis, and characterizes the progress of his case as marvelous.

REMARKS.

Granting that the intravenous method of administration of mercury is safe, it would seem to be a very valuable addition to our armamentarium therapeuticum in the treatment of syphilis. I have no hesitancy in saying that it is possible with safety to bring the patient under the full physiologic effect of mercury within forty-eight hours. Argument is unnecessary to prove the value of the treatment in certain emergencies. When carefully given, accidents should be infrequent. I am convinced that where the entire dosage is accurately placed within the lumen of the vein no reaction whatever will occur, providing the tourniquet be moved from the arm after the insertion of the needle into the vein and before the discharge of the mercurial solution has begun. I failed to remove the tourniquet in Case 5, with the result that the portion of the vein between the tourniquet and the needle was practically cauterized, with a resulting phlebitis. This passed away in a few days and left an indurated vessel, which is probably useless for further injection. In Case 10 considerable inflammation resulted on one occasion at the site of the injection. In this case I am confident that I perforated the posterior wall of the vein, thus permitting a few drops of the injected solution to enter the perivascular cellular tissue.

As to the location of the injections, either the median basilic or median cephalic vein in the forearm is an eligible site. The accessibility of these veins, however, varies, and some other site must sometimes be selected. I have found that any prominent and accessible vein will answer the purpose.

A PLEA FOR THE PHYSICAL EXAMINATION OF ALL SCHOOL CHILDREN.

LINSLY R. WILLIAMS, A.M., M.D.

Instructor in Medicine and Chief of Clinic, Department of Medicine, Vanderbilt Clinic, Columbia University; Assistant Attending Physician to the City Hospital.

NEW YORK CITY.

Education is compulsory in this country for all children from the ages of 6 to 14. In some states the duration of school life is longer. If the child is not presented by its parents for instruction, the parents must present some good excuse for its non-appearance; and social reasons are not accepted. There are numerous chronic ailments of childhood which absolutely prevent or militate against its receiving any instruction. The more important of these are serious congenital mental defects and defects of the heart or organs of speech. There exist, also, many minor defects, eradicable, provided the parents are informed that such defects exist. The existence of the minor defects, such as squint, nearsightedness, adenoids, enlarged tonsils, bad teeth, nervous twitchings, and so on, are often not discovered by the parents, nor is their seriousness realized until the child has for some time been under the influence of school life.

In March, 1905, the medical inspection became a medical examination of school children in New York. Up to January, 1907, 134,000 children had been examined. These examinations consist in examinations for hearing, vision, examination of the nose and mouth for the presence or absence of deformities and the examination of the heart and lungs as much as can be made by loosening the clothing at the neck. No measurements or weights are taken. The findings show an enormous proportion of minor defects and also a considerable proportion of more serious ones.

The percentage of children needing treatment is remarkably high, but need not unnecessarily alarm the people of a large city and make them feel that two-thirds of the children are lame, sick, halt and blind, and that these two-thirds are candidates for institutions for "dependents." "delinquents" and "defectives."

If we leave out (1) enlarged glands, defective vision and breathing, bad teeth, hypertrophied tonsils and postnasal growths, and if it is supposed that (2) malnutrition, defective hearing, cardiac disease, pulmonary disease, deformities of the spine, chest and extremities, bad mentality and chorea each existed in a different child, this reduces our percentage of defects to 19 per cent.

In the first group it is fair to assume that the defects, although of vital importance to the physical and mental development of the child, are yet not serious defects and in the majority of instances can readily be removed. But the importance of the examination, as already pointed out, is that, without the examination, these defects would not be discovered until they had seriously interfered with the physical welfare of the child. Of more importance than either of these examinations has been the examination of 160 over-age children, and of these children the percentage of defects was 84. It should be noted here that there is a marked increase in the proportion of defective vision, breathing, bad teeth, hypertrophied tonsils, postnasal growths and pulmonary disease.

It has also been discovered that in the special schools for backward children the proportion of defects runs up to over 90 per cent., and it was also found that among the truants there existed a still larger proportion of physical defects. The number of children so examined has not been very large, but of over a hundred truants examined over 95 per cent. revealed such physical defects as interfered with the progress of the child. On June 1, 1906, in school No. 110, a special school for backward children, eighty-one children were operated on for hypertrophied tonsils and adenoids. After the operation there was a small riot in the neighborhood, caused by the mothers, due to the facts that the children were operated on in a place not suitable for the purpose, and that the operation, though short and comparatively painless, is necessarily a bloody one.

A report of seventy-seven of these backward children obtained by the Department of Health reveals the following significant facts:

All of the seventy-seven have improved physically and have been promoted.

All but four have done more in school in the past six months than in the previous two years.

One child did three years' work during the past year; that is, a child of 11, backward, was promoted rapidly and performed all the work that is expected of a child 6, 7 and 8 years of age.

Four of these seventy-seven children did not advance.

It may very readily be assumed that this rapid promotion was due almost entirely to the improvement in their physical condition, which resulted from the removal of their hypertrophied tonsils and postnasal growths, which had so seriously interfered with their breathing and consequently with their physical and mental development.

I have also examined 2,000 children who were sent to Sea Breeze at Coney Island, conducted by the New York Association for Improving the Condition of the Poor, the results of which were similar to the examinations of the Department of Health.

An interesting addition to the examination was obtained by measuring height and chest circumference of a large number of these children and in weighing them. It will be noted by referring to Tables 3 and 4 that for almost every age all the measurements and weights were below the standards obtained by Bowditch and Porter in the measurements and weights of school children in Boston and St. Louis.

The conclusions to be drawn as result of these important investigations are as follows:

1. A very large proportion of children have defects in their make-up, but most of which are not immediately serious and are very easily remedied. This has been shown by the remarkable investigations made by the Department of Health in New York City under the able direction of Dr. John J. Cronin, Chief Inspector of Schools. The experience of other physicians in the larger private schools and the experience of physicians in a large practice among children, all show that these minor defects exist to almost the same extent among children of well-to-do parents.

TABLE 1.

CHILDREN EXAMINED BY THE DEPARTMENT OF HEALTH, MARCH, 1905, THROUGH DECEMBER, 1906.

Items Compared	March, 1905, to June, 1906, Unclassified Children		Sept. to Dec. 30, 1906, First Year Pupils		December1, 1906, Over-age Children	
	Number	Per Cent.	Number	Per cent.	Number	Per Cent.
Number examined	97,543	...	36,190	....	169	
Num. needing treatment	64,735	66	25,075	69	142	84
Malnutrition	6,111	6	1,093	6	12	7
Enlarged glands	37,638	38	17,464	48	57	33
Defective vision*	30,789	31	3,533	21	66	39
Defective breathing	11,805	12	5,601	16	38	22
Defective hearing	1,936	2	229	.6	3	1
Teeth	38,991	40	18,788	62	91	53
Hypertrophied tonsils	17,835	18	8,716	24	61	36
Post-nasal growths	9,700	10	4,857	13	25	14
Cardiac disease	1,635	2	356	1	5	22
Pulmonary disease	1,027	1	318	.9	6	3
Skin disease	1,947	2	600	1.6	None	None
Deformed spine	804	.8	105	.3	3	1
Deformed chest	555	.5	107	.3	5	2
Deformed extremities	859	.8	189	.5	None	None
Deformed palate	1,206	1	323	.9	1	.5
Mentality bad	2,427	2	640	1	8	4
Chorea	1,772	2	346	.9	4	2

*Only 16,737 children examined for vision.

TABLE 2.

SEA BREEZE EXAMINATION OF SCHOOL CHILDREN—SUMMER OF 1906. Girls, ages 5 to 15. Boys, 5 to 12.

	Boys.		Girls.		Grand totals.		Total per cent. defect.	Ed. of Health percentages.
	No. exam.	No. defect.	No. exam.	No. defect.	No. defect.	No. exam.		
Teeth	555	412	788	562	1,343	974	72	40
Hypertrophied tonsils	550	85	769	101	1,346	186	13	18
Enlarged glands of neck	555	..	801	..	1,356	...	...	...
Anterior	..	400	..	436	...	836	61	30
Posterior	..	299	..	324	...	623	46	8
Chorea	517	4	760	8	1,277	12	9-10	1
Cardiac disease	519	30	765	79	1,284	109	8	1
Pulmonary disease	521	13	763	20	1,284	33	2	1
Skin diseases	513	6	755	9	1,268	15	1	1
Deformities	276	73	797	92	1,973	165	15	2
Defective vision	417	38	709	80	1,120	118	10	31
Defective nasal breathing	540	36	780	34	1,320	70	5	12
Adenoids	531	54	785	35	1,316	89	6	10
Defective hearing	445	19	699	33	1,144	52	4	1
Defective mentality	329	54	525	48	854	102	11	2
Poor nutrition	372	125	682	246	1,954	371	35	6
Deformed palate	544	20	790	20	1,334	40	2	1

TABLE 3.

MEDICAL EXAMINATION OF SCHOOL CHILDREN AT SEA BREEZE—SUMMERS 1905 AND 1906.
Girls 5 to 15.

Age.	Height.			Chest circumference.			Weight.		
	No. ex.	Aver.	Stand.[1]	No. ex.	Aver.	Stand.[1]	No. ex.	Aver.	Stand.[2]
5	81	42.1	41.4	97	20.7	21.	58	37.3	37.
6	130	43.4	43.6	147	21.3	22.8	98	37.8	38.8
7	124	44.3	45.9	141	21.7	23.5	97	43.24	42.4
8	147	47.1	48.	162	21.24	23.8	121	45.5	46.8
9	133	47.9	49.6	152	22.83	24.5	119	51.2	51.9
10	146	50.1	51.8	159	23.5	24.7	123	57.11	55.12
11	123	53.08	53.8	131	24.4	25.8	91	62.3	61.4
12	130	55.3	57.1	142	25.24	26.8	99	70.5	68.8
13	72	57.1	58.7	83	26.2	28.	57	75.9	78.9
14	45	57.4	60.3	49	27.5	29.2	33	86.7	89.5
15	13	60.4	61.4	15	26.9	30.3	10	88.8	97.9

TABLE 4.
Boys 5 to 11.

Age.	Height.			Chest circumference.			Weight.		
	No. ex.	Aver.	Stand.[1]	No. ex.	Aver.	Stand.[1]	No. ex.	Aver.	Stand.[2]
5	74	41.2	41.7	89	20.9	21.4	81	35.4	38.6
6	119	41.3	44.1	137	36.1	23.2	137	40.5	40.6
7	157	43.2	46.2	171	21.9	23.7	161	39.4	44.3
8	135	46.5	48.2	144	23.2	24.4	140	45.5	49.1
9	123	49.7	50.1	138	20.8	25.1	134	53.6	53.14
10	96	51.2	52.2	107	24.34	25.8	109	57.7	57.
11	101	52.9	54.	115	25.05	26.4	110	63.05	63.1

2. The seriousness of a large number of these defects become manifest so soon as the child enters on school life.

3. If these defects be not removed, the child becomes and continues dull, lethargic, lazy, stupid and backward and at times recalcitrant, obstinate, unmanageable and immoral.

4. In many instances where these last conditions have existed and have been alleviated, the child soon begins to assume a more normal aspect of physical and mental well being.

5. Some more active means are necessary to put the burden of responsibility on the parents and to instruct them in the necessity of attending to the health of their child, no matter how apparently trivial the ailment or defects may be.

AËROPATHY OR COMPRESSED AIR ILLNESS AMONG TUNNEL WORKERS.*

SEWARD ERDMAN, M.D.

NEW YORK.

Exposure of the human subject to an environment of greatly altered barometric pressure so disturbs the organism which has always been adjusted to the normal atmospheric pressure of fifteen pounds to the square inch that there frequently arises a train of symptoms at once most interesting and most varied.

No one term has ever been adopted for this curious affection; therefore aëropathy suggests itself as simpler and more comprehensive than the older and more restricted terms, "caisson disease," "diver's palsy," "bends," "compressed air illness" and "balloon sickness," for even this last-named disease is similar in its manifestations and probably identical in its etiology with that of compressed air illness.

The vast engineering feats of the past half century in which compressed air has been used to permit men to work under water for mining, for laying foundations of bridges, buildings, jetties, etc., and in submarine tunneling, have in effect created this disease, which has been aptly spoken of as "the disease of modern civilization" and "the nineteenth century disease."

From earliest times the human intellect has aspired to master the watery element. Indeed tradition has it that over 2,200 years ago Aristotle conceived the idea of the diving helmet and that the contemporary ruler, Alexander the Great, descended to the bottom of the sea in a diving bell. However this may be, the first authentic accounts date from 1525 A. D., when Sturmius or, according to other writers, Taisnier, invented the primitive diving-bell in which the only ventilation was afforded by the breaking of bottles of air carried in by the workers.

In 1605, a diving bell was used to raise parts of the sunken Spanish Armada.

The caisson in a practical form was designed in 1839 by Trieger, a French engineer, who employed it with success in coal-mining operations beneath the River Loire, and his observation of the occurrence of pains in the arms and legs of the workers constitutes the earliest mention of this new disease.

During the past sixty years, numerous contributions have been made to the literature of aëropathy, in French by Pol and Watelle, Paul Bert,[1] Raneaux and others, in English by Snell,[2] Hill and Macleod,[3] Hill and Greenwood,[4] Oliver[5] and others, in German by von Schrötter, Heller and Mager,[6] and by our Americans, A. H. Smith,[7] Jeminet and others.

The extensive use of compressed air in recent engineering enterprises has made the occurrence of aëropathy much more common, to-wit: in the building of the new Firth of Forth Bridge in Scotland, the Brooklyn bridge, the great bridge at St. Louis and the Blackwall tunnel under the Thames in London, which till twelve years ago was the greatest undertaking of this kind.

To-day, in New York, the construction of numerous great river tunnels and of foundations for tall buildings and bridges, engages the labor of many more men in compressed air than at any previous period, and cases of illness, distributed, as they are, throughout the city, are daily being brought to the attention of greater numbers of practitioners of medicine.

The subject matter of this paper, apart from the historical and certain theoretical considerations, is founded on my experience of more than a year on the medical staff at the East River tunnels from Thirty-fourth street, New York, to Long Island City.

For the use of the Pennsylvania, New York & Long

1. Bowditch's standard. Standards reduced to net weight according to scheme suggested by Holt (Dis. of Children, edition 1897, p. 19).

2. Porter's standard.

* This paper was read before the Quiz Medical Society of New York City, May 11, 1907.

1. La Pression Barométrique, Paris, 1878.

2. The Blackwall Tunnel from a Medical Point of View, Hospital, London, 1897, xxii.

3. Caisson Disease and Diver's Palsy, Journal of Hygiene, 1903, iii, 401-445.

4. Proc. Roy. Soc. Lond., 1905-06, B., lxxvii, 442-453.

5. Dangerous Trades, G. P. Dutton, 1902; A Lecture on Caisson Disease, Lancet, 1899, vol. 1; Caisson Disease (translation), Annals d'Hygiene Publique, 1906, 4 s., v, 385-410.

6. Heller, Mager and von Schrötter: Luftdruckerkrankungen (2 vols.), Vienna, 1900.

7. A. H. Smith: Physiologic, Pathologic and Therapeutic Effects of Compressed Air, New York, 1894.

Island Railroad, the firm of contractors, S. Pearson & Son, Inc., is constructing four great tunnels under the East River, one beside the other, at a depth of from 80 to 90 feet below high-water level. Each tube is of a diameter of 23 feet, with its roof more than 20 feet beneath the river bottom.

According to the physical laws governing submarine work, approximately one pound of compressed air is required for every two feet in depth of water; and, as the river bottom consists, in large part, of soft silt or muck, nearly as fluid as water, and subject to the same hydrostatic laws, it follows that most of the tunnel construction must be carried on under an air pressure of + 30 to + 37½ pounds or + 2 to + 2½ atmospheres.

The starting point for the tunnels is some 200 feet inshore from the river, where great shafts were sunk by means of caissons filled with compressed air, and at the necessary depth of over 80 feet the horizontal tubes were started toward the opposite shore. Before advancing many feet, a heavy bulkhead, 12 feet thick, was built entirely to block the mouth of the tube. This bulkhead is pierced by three horizontal cylinders, called "locks," each being about 7 feet in diameter and 20 feet long, and fitted at both ends with steel doors opening inward toward the tunnel ahead. Two of the cylinders, on a lower level, are for supply cars and muck cars, the one above is for men.

On completion of the bulkhead, compressed air was no longer necessary in the shafts, which were uncovered and fitted with elevators to the surface, and now the compressed air, supplied by the seven great compressing engines, is conducted directly into the tunnels forward of the bulkhead.

A visitor to the tunnels to-day descends the open shaft in an elevator, or cage, and at the bottom is confronted by the great cylinder, 23 feet in diameter, made up of rings of heavily-flanged iron plates, bolted securely together. The bulkhead with the locks, in the near foreground, obstructs a view of the tunnel "heading" where the boring is proceeding.

A shift of men has just left the tunnel and the visitor finds the upper lock "out," i. e., only the door at the farther end is closed. He enters the lock, which resembles a great horizontal boiler, and close behind is the steel door, with its thick facing of rubber, called the "gasket." A valve is opened, and the compressed air from the tunnel ahead enters the compartment with a great rushing noise. Immediately the door behind is sealed so tightly that no human force could stir it. By the electric light in the lock, the visitor can watch the pressure gauge and thermometer, both of which begin to rise.

The so-called physiologic effects of compression may be described at this point:

(1) In the first place, there will very probably be a feeling of nervousness if one is unaccustomed to the roar and the queer sensations. (2) Next a sensation of pressure from without on the ear-drums, soon becoming a positive discomfort, or even exquisitely painful, unless one equalizes the pressure on the ear-drum, which may be done by swallowing or performing the valsalva, which opens the Eustachian tubes. At this point, a man with impervious Eustachian tubes, from a coryza, or catarrh, may have to desist from entering the tunnel; he is "blocked" and returns to the physician's office, where a Politzer bag at once gives him relief. In my experience, several cases of rupture of the membrana tympani have occurred, when a man through ignorance or foolish determination has continued to raise the pressure when he was blocked. (3) The temperature in the locks may rise to 95° or even 100° F during compression, and one breaks out into a profuse sweat. (4) Above 15 pounds the tip of the tongue and the lips feel slightly numb, much as if covered with oil or vaselin, and it becomes difficult or impossible to whistle or to whisper. (5) One becomes conscious of a slight resistance to expiration, and a very few forced expirations make one giddy. (6) The voice loses its timbre and individuality and acquires a high-pitched nasal quality. (7) A lighted candle burns with a smoky flame and can scarcely be blown out, as it tends to relight itself in the more abundant oxygen. (8) I have demonstrated that the boiling point of water at + 15 pounds is 248° F., and at + 30 pounds my feeble alcohol lamp could not produce boiling, although the thermometer registered 268° F.; hence this would be an admirable place for surgical sterilization even in an open boiler.

At + 32 pounds, the roar of entering air fades away and the pumping of the huge compressors in the powerhouse, way above, can be heard distinctly. The pressure in the lock is now equal to that in the tunnel, and there is no difficulty in pushing open the further door and entering the tunnel ahead, where the air is damp, but cooler, i. e., from 65° to 80° F.; humidity, 90 per cent.

Were it permissible in a paper of this sort, nothing could be more interesting than a description of the work at the "heading" and of the wonderful steel shield advanced by hydraulic jacks, as ring after ring is built in place behind it, but I must proceed with the mention of further so-called physiologic effects, which, however, I feel are open to question, if they be not absolutely erroneous. (1) Pallor of the skin, described by A. H. Smith,[7] has been entirely discredited by von Schrötter's observations of the skin, mucous membranes, vocal cords and ear-drums. I have repeatedly failed to notice any blanching during compression, and attribute the observation either to pure theorizing or to a nervous pallor, which I have occasionally noticed among frightened visitors. It is true that after some days or weeks of tunnel work the men become pale, but who would not if kept entirely away from the sun and in an atmosphere nearly saturated with humidity, like a Turkish bath? (2) The pulse does not disappear, nor is there any demonstrable alteration in its volume, as claimed by Smith, but disproved by the pulse tracings of von Schrötter. By several competent observers the pulse rate is said to be slowed after a transient increase; von Schrötter claiming a loss of 14 beats per minute. My own series of fifteen cases demonstrates no appreciable change, either on first entering the air or after remaining several hours, for the figures show only an average slowing of one-half beat a minute. (3) That the veins are compressed or emptied (Smith) is not substantiated by other observers, and repeating the experiments of von Schrötter[6] and Hill and Macleod[3] I have watched the circulation in the web of a frog's foot under the microscope while the pressure was being raised to + 30 pounds, also during decompression, and certainly there was no perceptible change in size of the small vessels nor in the rate of flow; nor is any change in a man's radial pulse noticeable by palpation. (4) The effect of pressure on the arterial tension has been variously described; Oliver,[5] of England, claims that the pressure is heightened; others say that if is lowered. My own series of sixteen cases, observed by means of the Janeway modification of the Riva Rocci sphygmomanometer,

shows an average lowering of only 2.5 mm., which is practically negligible; certainly there is no increase. (5) The respiration, claimed by Oliver and Smith to be quickened, according to von Schrötter is probably not altered in rate, or, if anything, slowed by one or two per minute; nor is the vital capacity changed (von Schrötter[6]), although Smith claims that the chest expansion is diminished. Personally I experience a tendency toward slight inspiratory effort. (6) Jeminet, of St. Louis, claims to have demonstrated increase in urinary secretion in two cases, but I can not learn of any such change according to the experience of many old air-workers. (7) Smith believed that the tunnel air, saturated with moisture, prevented sweating; but Hill and Macleod[3] show that, so long as the body temperature is higher than that of the tunnel, evaporation will continue, and it is certainly my experience that the men do sweat on exertion in the tunnels. Did the temperature in the tunnel rise above 85° to 90° F. evaporation would be lessened and there would be some danger of heat exhaustion, of which there were several cases last summer. (8) Several writers state that the hollow viscera are compressed and that the men must habitually tighten their belts on entering the tunnel. I have failed to elicit this statement from any old workers questioned, and a series of waist measurements taken by me showed absolutely no change in girth, or in one case a slight increase, probably due to intestinal fermentation. (9) Hissing of the urine, or passing of gas per urethram, on leaving the tunnel, has never been heard of in my cases, although I have catheterized several patients suffering with the "bends" and have questioned many old workers.

Other Effects.—(1) Certainly there is a slight sense of exhilaration to one in the tunnel, and heavy, leather-shod rubber boots seem lighter as one climbs ladders and walks about. (2) Wounds bleed just as freely and heal just as quickly as in the open air. (3) The body temperature may be slightly raised (99.6° F.). (4) Many men say that the appetite is increased.

PATHOLOGIC EFFECTS.

Proceeding now to the pathologic effects of compressed air, one is first impressed with the fact that there are never any such manifestations while a man is entering or abiding under pressure, and that the disease is, in reality, one resulting from decompression. Although theoretically it is possible to occur in the locks during decompression, in our series of 1,419 cases we have encountered no such instance. The onset of symptoms is usually some minutes after arriving at normal atmospheric pressure. We found that over 43 per cent. of the cases began within less than one-half hour; 32 per cent. between 30 and 60 minutes, making 75 per cent. of all cases during the first hour. A few rare instances of delayed onset up to ten or twelve hours have come to our notice.

Incidence.—Our 1,419 cases occurred among 3,500 different individuals starting work at our tunnels, where the pressure has averaged over + 30 pounds or + 2 atmospheres, giving an incidence of 40 per cent. illness among all workers, which figure would possibly be doubled if every case of minor, transient pains and itch were recorded. This 40 per cent. represents cases severe enough to come under treatment at the medical office. The majority of cases occur among new men or among old workers who have been away for a period, showing that one may become, to a certain extent, habituated.

Causative Factors.—Undoubtedly the three factors of chiefest importance in the production of this disease, as set forth by Paul Bert[1] in 1878, are: (1) Amount of pressure; (2) duration of exposure to pressure, and (3) shortness of the period of decompression. Other factors are the age and physical condition of the worker, general hygiene and ventilation.

Barometric and telluric conditions have been assumed by some men to be of moment, but charts kept by us for a period of months, setting forth the daily temperature, humidity, barometric readings, condition of the weather, and direction of the wind, have failed to show any constant influence on the incidence of cases of illness.

Young men from 20 to 35 years of age are preferred, and no one with any gross organic lesion should attempt the work. The Anglo-Saxon and the negro stand the work the best, while Poles, Slavs and Turks rarely do well; but this difference seems to me largely due to the generally flabby, underfed condition of the latter class, who seem lacking in resistance. Fat men do not endure so well as the slender, a possible reason lying in the fact, recently demonstrated by Professor Haldane, of England, that animal fat absorbs much more gas, under pressure, than the other body tissues. Arteriosclerosis is a serious defect. Constipation and working on an empty stomach certainly predispose to attacks of illness.

The length of the shifts, *ceteris paribus*, directly influences the number of cases of illness and should be regulated as follows: For pressures below + 30 to + 32 pounds, two shifts of four hours for each man; for pressures + 32 to + 38 pounds, two shifts of three hours, with an interval of three hours; for pressures above + 38 pounds, two shifts of two hours, with an interval of four hours. For very high pressures the shift must be correspondingly shortened.

The time occupied in decompression, i. e., coming out, is a most important factor, and for safety should not occupy less than eight minutes per atmosphere. Exercise of the arms and legs during decompression aids the circulation in eliminating the air and practically we find that there has been much less illness among the men from the time that a second bulkhead with locks was built 500 feet from the first one, and thus necessitating a break in the decompression and compulsory exercise in walking the distance between locks at half pressure. Severe exertion after coming out is said to cause "bends;" on the other hand, old workers often walk off an attack of "bends."

Symptoms.—The protean manifestations of compressed-air illness will appear in the following analysis of our 1,419 cases, which shows that in at least a third of the cases a combination of two or more of the symptoms was present. In locality, pains in the lower extremity, chiefly in the legs and about the knees, occur with greatest frequency, being present in 74 per cent. of the cases; next, the upper extremity, 38 per cent., chiefly about the elbow. In the extremities the right and left sides seem to suffer alike. Vertigo occurred in 7 per cent. of the cases; abdominal pains, in 5 per cent.; nausea, 2 per cent.; vomiting, 2 per cent.; numbness, 2 per cent.; general prostration, 2 per cent.; pains in chest, 2 per cent.; pains in head, 1 per cent.; pains in back, 1 per cent.; extreme weakness, or partial paralysis of an extremity, 2 per cent.; true motor and sensory paralysis, 1 per cent. (paraplegia); a peculiar blotchy, bluish mottling of the body, 1 per cent.

Other symptoms more rare are: dyspnea, or "chokes"; anesthesia; anesthesia dolorosa; retention of urine; exaggerated, diminished or absent knee-jerks; ankle clonus; spasticity; convulsions; unconsciousness; nystag-

mus; blindness; diplopia; deafness; ataxia; tongue deviations; localized edema, or emphysema; râles in the lungs; bloody vomitus; temperature elevation; pain in testicles and kidney region; fluid in the knee (probably not due to air); a hemorrhagic skin lesion, resembling erythema circinata, or iris, is occasionally to be seen and may appear after several days; toothache in carious or poorly-filled teeth; perforated eardrums; sinusitis, frontal, maxillary, or ethmoidal. Epistaxis is rare and easily accounted for by the existence of a coryza and the rough handling of the nose in performing valsalva. Also, there should be mentioned a very common pruritus corporis, or "itch," immediately on coming from pressure, especially if a man does not sweat freely; it is usually relieved by a hot bath.

Some of the more common groups of symptoms may be: (1) Pains in one arm and one leg, with or without numbness; (2) vertigo, or "staggers," with nausea, vomiting and frequently epigastric pain; (3) weakness and numbness of both legs, with or without retention of urine; (4) true motor and sensory paraplegia; (5) extreme prostration or collapse, with vomiting, rapid, weak pulse, mottling of the body, coma and death.

Fatality.—At the St. Louis Bridge work, Jeminet reports fourteen deaths in 119 cases, nearly 12 per cent. A. H. Smith,[8] in 110 cases at Brooklyn Bridge, reports 3 deaths, or nearly 3 per cent.

At the first Hudson tunnel, among from 45 to 50 workers, 12 deaths occurred in a year, or 25 per cent. of all the men who worked, but this figure drops to less than 1 per cent. after the introduction of the medical air-lock by Mr. Moir.

Snell[2] reports 200 cases, with no deaths, at Blackwall tunnel. In our series of 1,419 cases, there was less than 1 per cent. mortality.

FATAL CASES.

Two patients with myelitis and paraplegia lived for several months, finally succumbing to septic complications. One patient seemed to improve for three days, then suddenly developed paraplegia, subcutaneous hemorrhages, went into collapse and died. The remainder all died within twenty-four hours from the onset, and with only two exceptions were unconscious from the start, or rapidly became so, presenting the symptoms of general collapse and heart failure, with vomiting and mottling of the skin. Hence, pain is not often complained of in the most serious cases.

Autopsies.—I have notes on 7 autopsies, of which I personally witnessed 4.

Free bubbles, or collections of gas, were found in the blood in all 5 of the cases in which autopsy was performed within eighteen hours after death. The 2 delayed autopsies showed no free bubbles.

Summary.—To group the gross pathologic findings, there were: Air collections, distending the right heart; air in the vena cava, in the mesenteric, meningeal and coronary vessels and generally distributed in the veins; bubbles in the cerebrospinal fluid; one case of edema of the brain; congestion of the liver and kidneys; interstitial emphysema of the lungs; minute hemorrhages in the cord, with myelitis; raised patches of gas beneath the mucous membranes of stomach and intestines; myocardial degeneration and a softening of the voluntary muscles; intense mottling of the skin.

Other lesions mentioned in literature include congestion of the cord and brain, actual splits or clefts between the nerve cells, due to bubbles; thrombosis of the pulmonary artery; thrombosis of medullary artery of the femur, with resulting necrosis of the bone.

TREATMENT.

Prophylaxis.—This embraces the selection of men who are physically fit; proper regulation of the length of the shifts and the period of decompression, *v. s.*: Proper attention to the general hygiene of the body functions; not entering the tunnel with an empty stomach, and on coming out the use of hot coffee and a warm bath and warm clothing, and the avoidance of cold drinks.

Active Treatment.—The only active treatment of compressed-air illness which is at once the rational treatment, and by all odds the most efficient, consists in recompression in a specially constructed lock, called "the medical air-lock." We have two such locks adjacent to the physician's office in Thirty-fourth street. Each is similar to the tunnel lock in shape, but is divided into two compartments, the inner one corresponding to the tunnel, the outer corresponding to the entering lock. By this arrangement the physician or attendant can go in and out to the patient without disturbing the pressure in his chamber. The inner chamber is fitted with two wire couches, a telephone, electric lights, clock, pressure gauge and glass porthole, through which the patient may be watched. It is heated by electricity to avoid danger of a steam leak.

It is, indeed, gratifying and little short of miraculous to see a man completely paralyzed from his waist down or bent double with excruciating pains in his abdomen or legs placed in this lock, the pressure turned on, and long before the tunnel pressure is reached the paralytic is walking about, and the sufferer is smiling.

In treating the patients, the pressure is rapidly raised to tunnel pressure, and at once very slow decompression is instituted at the rate of two minutes to one pound. Frequently after this treatment the pains return and recompression once, twice or more times is advisable. For persistent pains, defying recompression, counter-irritation, heat locally applied, massage, hot baths or exercise, often accomplished the desired result; also the Faradic current is frequently of benefit. Very rarely anodynes are necessary; in these cases the pains may continue for two or three days and then finally wear off. The use of ergot, as advocated by A. H. Smith, I have never seen do the slightest good, and, inasmuch as, in most of his cases, he combined it with plenty of opium, and the men recovered in from one to three days, I believe he merely deadened the pain and allowed Nature to effect the cure. His theoretical indication for the use of ergot I believe is fallacious.

Of our cases, 1,343 of the 1,419 patients were treated by recompression, complete relief being afforded 869, or 64 per cent.; 50 per cent. were completely relieved by one recompression; 28 per cent. were so much relieved as to be able to go home and carry out therapeutical measures, and only 8 per cent. failed to get relief at all.

But note that only in 2 cases of the 1,343 did the men not experience entire relief while under recompression, although the pains returned in some cases.

The cases of collapse and cardiac weakness naturally received appropriate stimulation. Retention of urine demands the catheter, and mild abdominal pains may sometimes be relieved by the administration of aromatic ammonia, ginger, peppermint, etc.

In our 21 cases of true paralysis, paraplegia or monoplegia, 13 patients were relieved entirely by one recom-

8. Cases of Caisson Disease, Med. and Surg. Reports, Presbyterian Hospital, New York, 1896.

pression; 4 cases cleared up in from 1 to 10 days, 2 persisted for from 2 to 6 months; 2 resulted fatally after several months from complications.

THEORIES REGARDING ETIOLOGY.

We are firm believers in the gas emboli theory, which is the one more commonly accepted to-day. First suggested in 1857 by Hoppe-Seyler, it remained for Paul Bert,[1] 1872-78, to prove this by animal experimentation, later elaborated by von Schrötter,[6] Hill and Macleod,[3] and others.

The theory rests on Dalton's law that: "The weight of a gas dissolved by a liquid is directly proportionate to the pressure," which law applies with only minor modifications.

When a man enters the air lock, his blood gradually becomes saturated, so to speak, with the larger amounts of nitrogen, oxygen and carbon dioxid, which are under tension in the air he takes into his lungs, and this absorption by the blood continues until the gaseous tension in the alveolar air and the blood is equal. As Langlois[9] points out, 64 per cent. of the body tissue is water, and may be similarly saturated; but the more remote tissue fluids require a longer period for saturation than does the circulating blood. Hence, the time element of exposure to pressure enters into consideration.

Hill and Macleod,[3] by analysis of the gases from the blood of animals, exposed to 6½ atmospheres for varying lengths of time, show that after 30 minutes the nitrogen equals 8.41 per cent.; after 2¾ hours the nitrogen equals 11.61 per cent.

As nitrogen is the predominant element in the air, being nearly 80 per cent., we readily see that we have chiefly to do with nitrogen absorption.

"The amount of N. in solution in the body at normal pressure is 675 c.c., but at + 22 pounds it is double this, or 1,350 c.c.

"The O. is practically negligible; at most at 22 pounds there would only be 50 c.c. to get rid of.

"The CO_2 tension in the atmosphere is so feeble and it enters into compounds in the blood so readily that at 22 pounds the amount free is almost none" (Langlois[9]).

Now, so long as a man continues under pressure, his body fluids may contain great quantities of air in solution, without giving him any symptoms, and this is proved by the fact that "bends" never develop in the air.

What, then, happens on decompression? If the circulation is good and plenty of time is taken in decompression (variously quoted at from 3 to 20 minutes per atmosphere), the blood gradually gives up the extra amount of gas to the rarefying alveolar air, and similarly the tissue fluids yield their gas to the blood, whose gaseous tension is constantly falling.

On reaching normal atmospheric pressure, or rather a short time thereafter, the man should be entirely rid of the abnormal amount of gas. (It has been suggested that oxygen inhalation at the end of decompression would hasten the elimination of nitrogen.)

On the other hand, if the decompression period be too short, or if the cardiovascular system be inefficient, the gas can not be eliminated fast enough at the lungs, and is given off in the form of tiny free bubbles in the blood or body tissues, which process has been likened to the opening of a soda water bottle with effervescence of gas bubbles.

These small bubbles may, and often undoubtedly do, circulate without difficulty, and gradually are given off by the lungs; but if they run together and form larger bubbles they interfere with the circulation as emboli, or by pressure in a nerve sheath, spinal cord or periosteum, cause paralysis or pains. The hasty ebullition of bubbles may rupture the delicate capillary wall and cause the tiny hemorrhages in the spinal cord, or vital centers found at autopsy; or may cause myelitis.

That this is not pure theory has been beautifully demonstrated by Hill and Macleod,[3] who placed the web of a frog's foot against the window of their pressure cylinder in such a way as to be able to watch the capillaries through a microscope. Pressure was raised to 200 pounds, followed by rapid decompression, when they beheld tiny bubbles hurry by, soon collecting to form obstructing emboli; but immediately recompression was instituted the bubbles became smaller and were absorbed and the circulation continued normally.

I have attempted experimentally to produce air emboli in three guinea-pigs and three frogs, which were placed in the tunnel at 33 pounds' pressure and kept there for from 6 to 72 hours, then decompressed as rapidly as possible (1 min.), but no symptoms of "bends" were evident in any case, nor did the web of the frog's foot show any circulatory change. Two of the guinea-pigs appeared normal. The third guinea-pig, at an early (15-minute) dissection, showed some almost microscopic bubbles in the blood of the vena cava inferior. All the experimenters on gas formation in animals have used pressures of from + 5 to + 10 atmospheres, which it was not possible for me to secure.

As to the clinical evidence of free gas bubbles: In several cases in literature, observers have felt sure that they could detect an emphysematous crackle in the vicinity of a painful joint. Again, we have had a number of interesting cases of trauma with laceration and a subsequent extensive surrounding emphysema, subcutaneous or intracellular; but the query here is: Did the air enter through the wound or was it given off from the extravasated and stagnant blood? Possibly both, although I must acknowledge that I have never detected emphysema in the cases of hematoma without laceration.

The presence of free gas bubbles at our autopsies, and in animals experimented on, seem indisputable facts; but if evidence be required in the living subject I have been fortunate enough to obtain some. Recently two very similar cases of persistent pain in the leg came under my observation. In each case, by very careful palpation, over a slightly raised, non-inflammatory swelling, above the ankle, over the inner surface of the tibia, I detected a soft billowy fluctuation, with the faintest indication of crepitation. In neither case had there been any trauma and the skin was intact. In each case the leg was submerged in water.

An aspirating needle was partially filled with alcohol and all the air forced out, and with the entire aspirator and operator's hand also submerged the swelling was punctured and the plunger drawn, and not a drop of blood came in either case, but a succession of bubbles of clear gas streamed up through the alcohol.

In one case, on moving the needle about, there was the gritting sensation of bare bone in all directions, and the collection of air was manifestly beneath the periosteum.

OTHER THEORIES.

The carbon dioxid theory, held by Snell and some others, regards the increased amount of carbon dioxid as responsible for the symptoms, by poisoning and by interfering with tissue metabolism. A chart kept by Dr McWhorter at the East River tunnels for months,

9. Hygiene Generale et Applique, Paris, 1906, I.

with daily carbon dioxid analysis from the tunnel air, showed variations of from .04 per cent. to .10 per cent., averaging .07 per cent.; but no relationship could be noted with the incidence of illness in these tunnels. Hall and Greenwood[4] have themselves been in air of .62 per cent. carbon dioxid without ill effects.

Oxygen Poisoning Theory.—This theory is based on the experiments with animals subject to high pressures of pure oxygen, i. e., from + 5 to + 10 atmospheres, which usually kills them, and some of the symptoms faintly resemble rare cases of "bends." One observer claims that the carbon dioxid tends to inflame the lungs and cause pneumonia and may be responsible for other symptoms.

I believe that the one fact, that compressed-air illness never develops while a man is under pressure, is sufficient to entirely discount any theory of poisoning either by carbon dioxid or oxygen. Also 99 out of 100 cases of illness bear not the remotest resemblance to the toxic effects of either carbon dioxid or oxygen.

Cold.—Trieger's theory of loss of body heat on decompression with a consequent "catching cold" is insufficient, although it may be an element in disturbing circulation and so predispose to "bends."

Pressure.—The mechanical pressure theory is the greatest opponent of the gas emboli theory, and has for its advocates Pol, Watelle, A. H. Smith and others, the idea being that the pressure on the surface vessels drives the blood into the skull and spinal canal, causing congestion or even hemorrhages in the central nervous system. According to Corning, of the Hudson tunnel, on decompression this congestion is changed into an anemia by the rush of blood to the peripheral vessels.

What I have already stated about the peripheral circulation and blood pressure, during compression, demolishes many of the premises of this theory. Also, why do not the symptoms of nervous congestion manifest themselves in the air? von Schrötter killed and dissected animals in the compressed air and saw no evidence of any such congestion.

And, lastly, this theory, as also the others just mentioned, fails utterly to account for the liberation of a single bubble of air; on which point our observations and the autopsy findings seem absolutely conclusive.

If we hypothecate the emboli theory, the rationale of the recompression treatment is at once apparent, for by recompression we immediately give to the blood and body fluids their increased ability to take into solution the obstructing or offending bubbles, and by slow decompression the gas is gradually eliminated at the lungs.

CONCLUSION.

Several points suggest themselves as demanding further inquiry and explanation. Why can a man, working with impunity for months, one day develop "bends," under precisely the same general conditions? Why is a new man more susceptible than those who are accustomed to the work? Is there a condition of the blood which retards the elimination of the gas? Why are symptoms sometimes delayed so long as from six to twelve hours?

These and many other problems in the study of aëropathy will doubtless soon be solved in these days of extensive compressed-air operations, furnishing, as they must, ever greater opportunities for clinical and laboratory observations.[10]

10. Other articles which may be consulted are those by Hermann, Uber Caisson Krankheit, Samml. klin. vortrage, 1902; C. J. Aldrich, Medical News, November, 1904; Henry Brooks, Caisson Disease, Long Island Med. Jour., April, 1907.

Clinical Notes

DERMATITIS EXFOLIATIVA NEONATORUM.*

WILLIAM M. BROWN, M.D.
Obstetrician to the Rochester City Hospital.
ROCHESTER, N. Y.

That this is a rare condition may be inferred from the little that is known of it and its cause. In reporting a case before the Rochester Academy of Medicine in 1904 I stated then that it was the only one I had ever seen. Dr. Rotch, in his book, says: "I have myself seen but one case in which it seemed to me that this diagnosis of dermatitis exfoliativa neonatorum could reasonably be made."

Since making that report several other cases have come under my observation attended by such dramatic conditions as to bring the subject more vividly to the minds of those interested than any words of a reader could, and as the number of those who had the opportunity to observe them was limited, I am constrained to make this additional report at this time.

Exfoliating dermatitis in the new born is a definite affection which was first described by von Rittershain in 1878, and stated by him to be a septic process, self-limited, and accompanied by definite characteristics. It occurs in children from one week to one month old, generally during the second week, and is known by the common name of Ritter's disease. von Rittershain says that it begins in the face generally about the mouth as a diffuse erythema, and spreads more or less rapidly over the entire body. The epidermis separates with slight or no serous exudate underneath and leaves a deep beefy red shining surface which drys in a short time with the formation of thin dry crusts or scales. There is apparently very intense irritation attendant on the course of the disease and more or less fever. There is generally some gastrointestinal disturbance. The upper layer of skin separates very easily, often coming off in large sheets, especially where subject to any friction. When it has passed to the drying stage and the crusts are removed, there follows a furuncular eruption of greater or less severity, which may sometimes become phlegmonous.

The duration of the acute trouble is about ten days, after which time the surface is covered with a fine papular eruption which has a tendency to become eczematous. The question of prime importance in this discussion is, not so much the character of the disease, as a consideration of its cause and its bearing on the relation of one patient to another, and it is that phase of the question that I shall emphasize.

CASE 1.—Infant, D., female, born July 25, 1904, after a very rapid but otherwise normal labor. The mother had an uncomplicated puerperium. The baby was breast fed and the establishment of functional routine was normal. The last regular visit of the physician was August 4, when the child was ten days old. On August 6, when the child was twelve days old, he was called because of a purulent discharge from the umbilicus, together with swelling and intense redness which radiated for some distance over the abdomen. The abdominal wall was very tense and the child was crying constantly. This condition had been observed the day before. A rigorous disinfection was performed and a compress wet with mercury bichlorid 1 to 1,000 was applied. In the afternoon of August 7 an intense redness was noted about the mouth, extending to the cheeks, with some spots of erosion and a few very small blisters. The child was very restless, crying all of the time, and the hands had to be restrained. At this time a diagnosis of eczema was made and Lassar's paste was applied to the

* Read before the Monroe County Medical Society, May 21, 1907.

face. The temperature was 100.5 F. On August 8 the swelling and discharge from the umbilicus had almost disappeared, but the dermal inflammation on the face was rapidly spreading and involving the trunk and extremities, where the skin was coming off in large patches, leaving a raw looking surface; on this day it was noted that on the inner surface of the limbs where they had been rubbed in kicking the skin, while normal in color and other appearance, was rubbed into wrinkles and was loose. The temperature remained about the same for several days and the thicker skin of the hands and feet came off in large masses. By August 11 the entire integumentary surface had separated and was covered with a dry scaly exudate, and from this time steady improvement continued. On August 24 the child had a severe enterocolitis and was very ill until August 28. At this time the crusts were coming off very satisfactorily, leaving a good-looking skin underneath. September 17 all scales had disappeared and nearly the whole surface of the body was covered with a very fine papular eruption and there was a complete alopecia.

The remaining cases all occurred in the maternity department of the Rochester City Hospital during a period from the middle of January until the middle of March, and are of much more importance in that they seem to show a distinct relation to each other.

CASE 2.—Infant, C., female, born Jan. 1, 1907. Mother unmarried, a native of Nova Scotia, aged 22, primipara. Labor lasted fifteen hours and was terminated by instrumental delivery for deficient uterine power. There was a low implantation of the placenta and the delivery was followed by a most extreme hemorrhage, which was finally controlled by direct compression of the placental site. During these manipulations a number of interstitial fibroids were discovered. The convalescence was slow, attended with a foul lochia and infection, with a temperature from 103 F. on the second day down to normal on the ninth. The baby was breast fed and normal until some time during the second week, when a redness and a small pustular eruption were noted about some of the fingernails. But little attention was paid to it beyond an intermittent disinfection. On January 17 there was a slight redness noted on the face and on the following day the erythema was spreading over the face, from which it rapidly covered the trunk and extremities. It was not until the erythema had reached the body that it was specifically called to the attention of the attendant, with the fear that it might be scarlet fever. It was then recognized as an infective dermatitis and a salicylated zinc oxid ointment applied. The baby left the hospital on January 28, while the skin surface was still covered with more or less of a scaly exudate. Unfortunately the temperature chart has been lost, but for a part of the time the child had a temperature of more than 103 F.

At no time during the conduct of this case was there any thought of any peculiar or specific infection, as it was supposed that the dermatitis was only an exaggerated normal due to some ordinary infective agent, and while the usual cleanliness and care of a baby were observed there was no definite isolation of the case.

CASE 3.—Infant, H., female, born Jan. 20, 1907. Mother unmarried, a native of New York, aged 24, primipara. Labor lasted ten hours and was terminated by a low-forceps delivery. There was considerable laceration of the vagina, but no external tear. On the sixth day, under a general anesthetic, the vaginal tear was freshened and repaired. There was a varying temperature ranging from normal to 102 F. during the first week after delivery and a very foul lochia. The baby was breast fed and was not active. On January 31 a dry parchment appearance of the skin of the feet was noted and a diagnosis of syphilis was made, subject to correction, and the child was given gray powder and the mother put on combined iodids and mercury. January 31 the baby's temperature was 104 F. and on February 1 it was 105 F., then fell to normal. The fingers began to be red and exfoliate, the erythema spreading to the face, then to the trunk and extremities. This case was accompanied with the most severe desquamation of any of the cases in the hospital and at one time the child's body resembled nothing so much as a piece of freshly cut beef; in fact, it was so red and raw looking that one observer said that he thought it must be some form of erysipelas. This case brought us to a realization of the fact that there might be a connection with the other one, and from that time most rigorous care was exercised to prevent any communication of this child with any others. The course of the trouble was typical and when the child left the hospital, February 13, there was still a fine papular eruption over much of her body.

CASE 4.—Infant, N., female, born Jan. 27, 1907. Labor and delivery were normal as well as the puerperium. The baby first became ill at about the end of the first week. The exfoliation began in the fingers, as with Case 2, and spread to the face and then to the rest of the body. The course was the same as the others, although it was not quite so severe as the one last cited. The record was destroyed, for which reason I am unable to give the exact details of the case, but the patient was discharged February 17.

CASE 5.—Infant, W., female, born February 21. The mother, a native of Ireland, aged 24, primipara, was delivered instrumentally after something over six hours of labor. There was considerable perineal laceration, which was repaired at once. Moderate infection occurred and the perineal sutures suppurated. The temperature varied from 100.5 F. down to normal on the tenth day. The baby was breast fed and was apparently normal until about March 5, when the same evidence of infection appeared about the fingernails, spreading over some of the fingers and then appearing on the face, from which it spread to the body and other extremities. On March 8 the child's temperature was 103.5 F. and on March 11 it was 104 F. On March 8 the pathologist reported as follows on this case: "Smears from exudate from vesicles, also cultures on broth and agar. Smears show a large diplococcus, which in places is lying in little clusters resembling tetrococcus and in other places like sarcinæ. Bouillon is clouded after twenty-four hours and smears from this show similar pictures in pure culture to above. On agar there is a diffuse, dirty white, grayish, rather coarse growth. Patient was discharged March 17.

CASE 6.—Infant, K., born March 3, female. Mother a native of Germany, aged 22, primipara. Delivery occurred at the end of a twelve-hour labor without instruments, attended with a considerable vaginal and perineal laceration, which was repaired at once. The puerperium was normal except for an offensive lochia. On March 7 the index finger of left hand became red and began to exfoliate. On March 11 the thumb and third finger of right hand were involved and on March 12 they were peeling. March 14 the redness appeared on the third finger of the left hand and on March 16 all the fingers of both hands were involved, and from this time on it spread to the face and head and then over the rest of the body. At no time did this patient show any rise of temperature. She was discharged from the hospital March 17.

CASE 7.—Infant, W., male, born March 8. Mother, a primipara, had a normal labor and puerperium. The baby developed a purulent ophthalmia some time near the end of the first week, smears from which, when stained, showed a diplococcus which the pathologist said were gonococci. The oculist who saw the case said that it did not seem altogether like a true gonorrheal infection, clinically. The ophthalmia responded promptly to treatment and the eyes recovered without permanent damage, but after a few days an erythema developed on the child's face and rapidly spread over the head, trunk and extremities and the skin commenced to exfoliate as in the other cases. The child was discharged from the hospital March 31.

During this time several other babies displayed a small pustular eruption about some of the fingernails, which went so far as to cause a redness followed by an exfoliation of the skin on those fingers, but which never went further than the fingers. These fingers were all washed with mercury bichlorid, 1 to 3,000, and bandaged with gauze wet with the solution.

There are a number of points of especial interest which may be considered in this series of cases. Each case that occurred in the hospital was under the care

of a different physician. The mother of each child infected was in a private room. Every child infected but one was a female. Five mothers out of the seven had a definite puerperal infection of greater or less degree of severity. At the time of this epidemic, for it can be called nothing else, there were delivered in the hospital forty-one children, who were cared for by the same corps of nurses and every delivery took place in the same room, and yet not one baby whose mother was in the ward became infected.

Case 6 developed in the same room that was occupied by Case 4, and Case 7 occurred in the same room that was previously occupied by Case 3, but between the time that one case was discharged and another taken in some days elapsed and the room was thoroughly fumigated, cleaned and painted.

I am indebted for the facts in these reports to Dr. Hastings, Dr. E. W. Mulligan, Dr. W. T. Mulligan, Dr. Elsner and Dr. Witherspoon, and I feel that great credit is due to the management of the hospital and the nurses for the care which made it possible to control an epidemic the cause of which was so obscure.

Since this report was finished, my attention has been called to a report of four cases of this affection by Dr. Foster in the *Journal of Cutaneous Diseases*. His cases were not related, we believe, and in three of them there was no attempt made to ascribe an etiologic factor, and in the other it was stated that the mother had some form of eruption resembling pemphigus. In my series, Case 1 had a virulent infection of the cord which was considered etiologic to the dermatitis, while in all but one (Case 4) of the cases in the hospital there was a maternal condition which might have infected the child.

AN AUTOMATIC CHECK FOR EXCLUDING AIR IN THE TREATMENT OF EMPYEMA.

CHAUNCEY E. TENNANT, M.D.

DENVER.

In the evacuation of pus from the pleural cavity I have recently adopted a method of drainage which prevents in a great measure the admission of air into the pleural cavity and yet permits the free outflow of pus. The advantage of maintaining a vacuum in the chest cavity is apparent.

The suggestion of Bryant[1] of attaching a collapsed rubber bulb to the end of the drainage tube after sealing the chest opening prompted an experiment with the check. The need for irrigation in a recent desperate case of empyema necessitated the adoption of the double tube to secure effective and frequent irrigation, and at the same time it afforded an excellent opportunity for the test.

The rubber tubing may be of any desired size, weight or length and with but a few minutes' work is easily converted into the ideal double current drain known as the Wetherill drainage tube, having been first devised and used by Dr. H. G. Wetherill of this city. The method of its making is probably best described in Binnie's last edition of Operative Surgery (p. 698) as follows:

> Cut two holes in a long piece of drainage tubing as indicated at A and B, Figure 1. Soap and draw one end of the tube through A and out at B, thus inverting that portion of the tube between the holes. Bend the legs of the tube down, so that the holes A and B will be left open for drainage. If bent in one direction they are open, if in the other closed.

1. Surg., Gyn. and Obstet., iii, p. 296.

The tube should be so bent as to bring C and D facing into the triangle. Holes A and B are cut into one side of the tube and C and D in the opposite side. A stitch at E holds the tube in shape (Fig. 1). The two ends of this tube are passed through two snug-fitting openings in a 7 by 7 inch thin dental guttapercha dam. The tube is then inserted well into the chest cavity up to the rubber dam, which latter is brought close to the chest

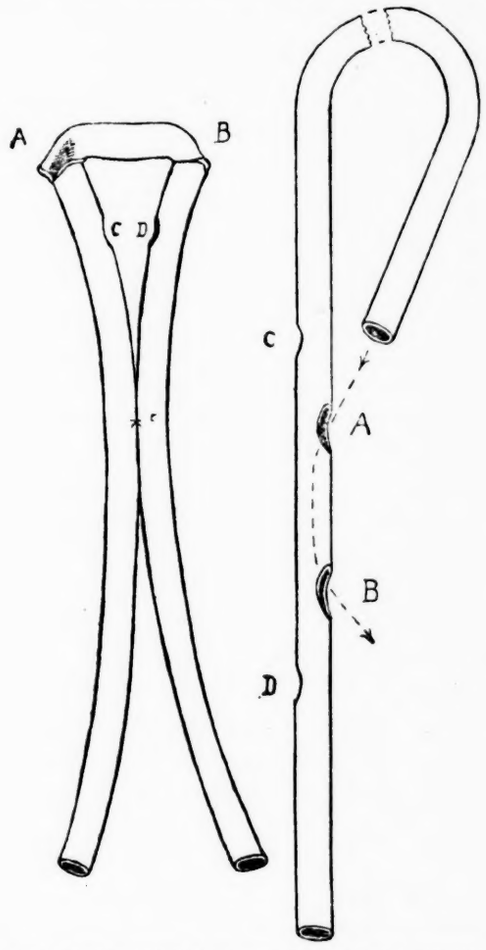


Fig. 1.—Showing method of cutting tube and inverting a portion of it.

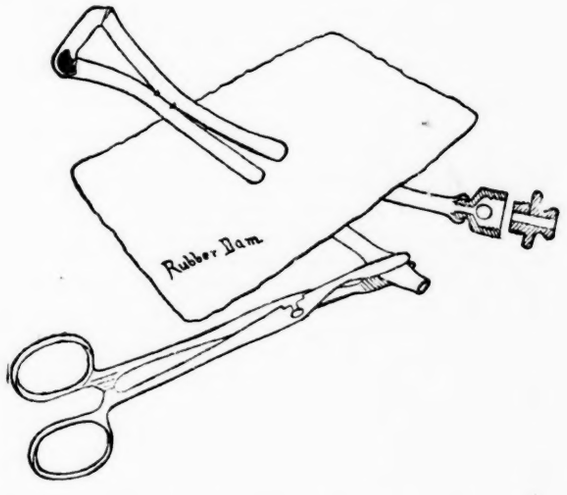


Fig. 2.—Free ends of tube passed snugly through rubber dam; ball-valve applied at one end and hemostatic forceps at the other.

wall with adhesive, thus acting as a barrier to the ingress of air around the tubes. Pus will escape underneath the dam as well as through the tube, but inspiration approximates the rubber shield to the chest wall and but little air enters the chest. To the intake end of the tube an ordinary hemostatic forcep is attached when the tube is not in use for irrigation, to the other end is placed an ordinary ball air check such as is in use in certain forms of bulb syringe. This check should be placed in either an upright or horizontal position to be effective (Fig. 2).

At my request for a check to use in this case, Dr. Roosevelt secured a large one from an abandoned syringe, and its use resulted in a free outflow of pus, little or no intake of air, and a comfortable, permanent and portable method of drainage, with irrigation tube already in place when desired.

I do not claim for this method any originality unless it may be for the application of the check, but I have found it so simple of operation, so convenient and comfortable, and withal so adaptable to almost all complications of empyema where simple rib incision is sufficient that I desire to suggest it as one method in handling these extremely trying cases.

CHRONIC ACETANILID POISONING FROM HARPER'S "BRAIN FOOD."

L. W. GLAZEBROOK, M.D.
WASHINGTON, D. C.

Having read with much interest Dr. Wynn's report[1] of a case of acetanilid poisoning, I desire to give an experience somewhat similar which has come to my attention during the last few weeks:

History.—Mrs. W., aged 45, presented herself at my office for treatment, with a history of general malaise, drowsiness to the extent of falling to sleep while sitting at her work, marked fatigue with little exertion, numbness in her lower extremities, with a certain degree of interference with locomotion, the symptoms having come on gradually during the last few months. She had attributed the condition to "change of life" or malaria.

Examination.—There was a marked bluish-white palor and general puffiness of the skin, more marked below the eyes; her lips were of a dark blue color and the conjunctivæ a peculiar bluish-red. The nails were a blackish-blue and the veins beneath the tongue were greatly enlarged. There was marked tremor of the extremities, with slight atrophy of the calf muscles. Respirations were about 22, with a pulse rate of 120. After a thorough examination I felt satisfied that there was no organic disease. Examination of the blood showed a red count of 4,600,000, with a pressure of 130 mm. On inquiring as to whether she suffered from insomnia, or headaches, or ever took medicines for these conditions, she replied in the negative.

Treatment.—She was put to bed and watched. Stopping one day at a drug store in her neighborhood, I asked the proprietor if Mrs. W. ever procured any drugs from him. To this inquiry, he replied in a jocular manner as follows: "If you doctors asked your druggists oftener about your patients you would be aware of many things; she has been buying a headache cure from my store for the last five years, during the last few months she has purchased one bottle every day." I secured a bottle of the preparation, which is put up by R. N. Harper, Washington, D. C. According to the label it contains 16 gr. of acetanilid and 30 per cent. alcohol to the ounce. The directions call for two teaspoonfuls (4 gr. acetanilid), every 2 or 3 hours in nervousness. For headache, two teaspoonfuls, to be repeated in twenty minutes if relief does not follow, and again repeated in thirty minutes if the desired effect is not reached. It states also on the label that "the use of this preparation is not followed by any depressing effects."

Under careful watching and treatment the patient's condition improved markedly and the natural color returned to her lips and nails. Her pulse, however, remained accelerated. Muscular weakness was still noticeable, and a certain anxious expression, to her countenance. When told that she was suffering from chronic acetanilid poisoning, she admitted only that several months ago she had headache and took one or two doses of this preparation.

2022 P Street, N. W.

1. THE JOURNAL A. M. A., Sept. 21, 1907, p. 1027.

A LID ELEVATOR FOR CATARACT OPERATION.

EDWARD SWASEY, M.D.
Oculist and Aurist to Worcester City Hospital.
WORCESTER, MASS.

In an operation for removal of cataract it is a serious situation if the patient suddenly attempts to close the eye while the speculum is still in place under the lids.

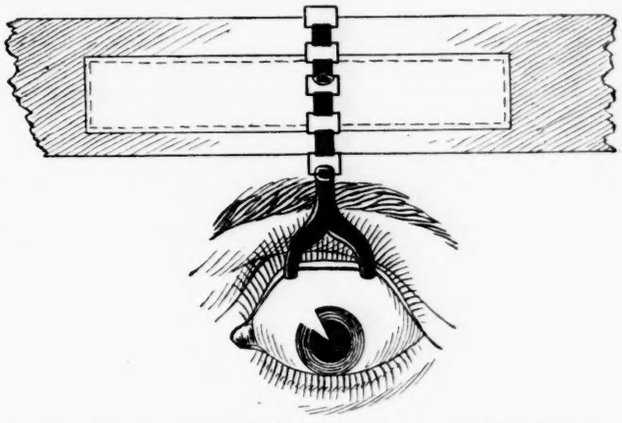


Fig. 1.—Front view of lid elevator, showing method of use.

Many an eye has been lost by this accident after the corneal section has been completed; for the lens may be forced out, followed by a serious loss of vitreous. Some of our most skilful and experienced operators have entirely done away with the use of the speculum for this

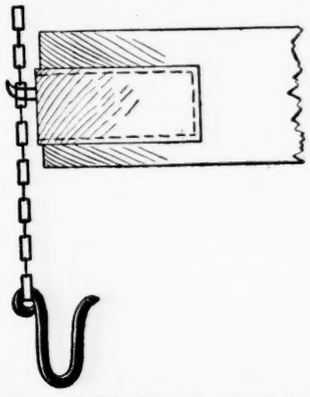


Fig. 2.—Side view of lid elevator, showing size of hook and method of attaching linked chain to head-band.

reason, and in its place use the thumb and fingers to keep the lids open, or they have a trained assistant to do this, or use a lid elevator. But not all operators can have such an assistant and at all times. Others remove the speculum as soon as the corneal section is finished and the capsule opened.

To avoid this source of danger as far as possible, and

not use any form of speculum, I have devised a form of lid elevator, shown in the illustrations (Figs. 1 and 2). It is a lid elevator, minus the handle, and in place of this I have used a small linked chain, which easily molds itself to the curve from the eye to the small shallow hook on the silver plate, attached to the band passing around the head. The hook of the lid elevator I am using is the same size as the one shown in the illustration (Fig. 2), and having the same curve. I found a more shallow hook was liable to turn out from under the lid if any considerable pressure was put on it.

After this hook is in place I have the patient try to shut the eye, to make sure that it will stay in place. Should it come out, I reintroduce it and lift the lid one or two links more on the chain, as much as the patient can stand comfortably. Under these conditions this form of hook has never failed to hold securely.

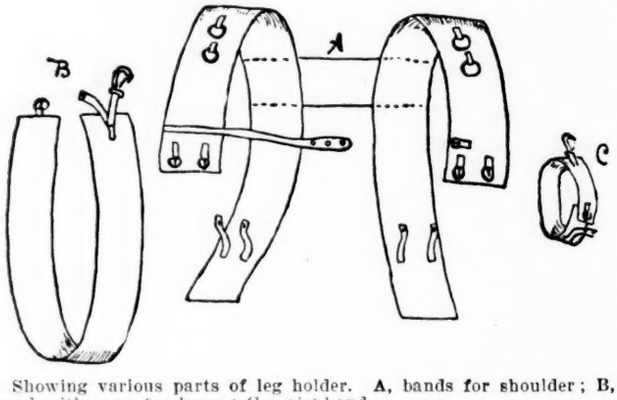
The eyeball is now well exposed, and the field of operation is unobstructed. Should the patient attempt to close the lids, the force of the pressure is not on the globe, but must be at the point of anchorage, the hook on the head band.

When one is operating alone, this little device is especially valuable. I have used it in hospital and private operations, and it has always served its purpose admirably.

A LEG HOLDER.*

EDWARD S. STEVENS, M.D.
LEBANON, OHIO.

In operating in rectal cases, or on the pelvis through the vagina, the assistance afforded by the ordinary leg-holders is considerable even when one has trained assistants at hand. The leg-holders of Kelly and Robb drag too much on the neck. I have tried to shift the drag to the shoulders by passing a sash-like band from



Showing various parts of leg holder. A, bands for shoulder; B, band with snap for knees; C, wrist-band.

each shoulder to the opposite side under the arm, but this produces too much pressure on the chest and interferes more or less with the breathing.

I have had made, therefore, an arrangement of canvas bands which shifts all the weight to the shoulders and leaves the chest free. It can be made easily by the nurse at a nominal cost.

A band is made about three inches wide for each side. They are arranged to buckle over the shoulders and under the axillæ quite loosely. Between the shoulders they are connected by a band of similar width four or five inches long. Low down in front a narrow band buckles across the body and prevents the shoulder-pieces from slipping from their places. One or more metal rings are fastened to the front of each shoulder-piece. A canvas band for the knees, padded or not as may be desired, is made with a snap to attach to the ring.

I have found it convenient to use a wrist-band with a snap to keep the hands out of the way of operator and anesthetist.

It looks at first glance like a good deal of harness. It is not as simple to apply as the Kelly-Robb holder. But it does the work better than anything of which I know except the stationary holders attached to many operating tables. The bands may be placed over the shoulders before giving the anesthetic if desired, or an otherwise unoccupied nurse may adjust them after the patient is unconscious. The few seconds more time for adjustment are more than balanced by the better distribution of weight during the operation.

* Presented at the Warren County (Ohio) Medical Society, Sept. 10, 1907.

CRETINISM OF EIGHT YEARS' STANDING.

RICHARD W. SOPER, M.D.
CONWAY, IOWA.

Noticing recently an account in THE JOURNAL of a case of cretinism, from Fairfield, Iowa, and the fact that mention was made of the number of cases reported in this state, I thought perhaps the presentation of a far more advanced case might be of interest.

History.—April 4 of this year, a child was brought to my office by the mother, the gross appearance of which was that of a baby 18 months to 2 years old, with the exception of the head, which was enormously enlarged. The actual age was 8 years and 6 months, and its weight, twenty-seven pounds. The expression was one of imbecility and repulsive beyond measure; the eyebrows overhung; the lips were puffed out; the tongue protruded from an inch to an inch and a half; there was continuous drooling from the mouth; the anterior fontanel was widely open; hair very scant, harsh and straight; teeth had decayed to the gums, but were solid in the alveolar processes; the abdomen was very prominent, and the legs were bowed; walking and speech had never been attempted. The child was, in fact, in a state of vegetation, as she had not the reason of an animal. She would sit for hours on the floor absolutely without moving or noticing anything. All former diagnoses had been hydrocephalus.

Treatment.—At first one-half a two-grain thyroid tablet was given t. i. d., equal to five grains of the fresh gland, and in one week I had increased the amount to a full tablet three times a day, and by the end of two weeks five tablets a day were taken. This has been kept up until now, and the results have been marvelous.

The child to-day, after four months' treatment, with the exception of size and speech not being clear, is like any other intelligent child. Of course, she has not yet obtained the growth of a child of 8 years of age, but she is at present growing at the rate of an inch to an inch and a quarter a month. The coarse hair came out and is replaced by a new growth of soft natural hair; the permanent teeth are erupting; the expression is bright and alert; the child plays all day, and is now walking; the weight has increased to forty-one pounds, this in spite of the fact that she lost seven pounds in the first weeks of treatment. With the exception that the child is small for her age, none could tell that she is not a perfectly normal child.

I cite this case, not because the treatment is new or that I have any new points in treatment to offer, with the exception that I pushed the thyroid medication more than is usual, combating the untoward symptoms with digitalis and mild nerve sedatives, but because of the remarkable results obtained in such a short time (four months) in a case of eight years' standing.

A PISTOL SHOT WOUND OF THE ABDOMEN: THIRTEEN PERFORATIONS. RECOVERY.

O. H. SWAYZE, M.D.
YAZOO CITY, MISS.

History.—R. B., a negro boy, aged 15, was shot in the abdomen with a .32-caliber pistol Aug. 15, 1907. Dr. W. E. Noblin had charge and called me in consultation immediately.

Operation.—An incision about seven or eight inches long was made in the median line. The first thing noticed after opening the cavity was the strong odor of fecal matter and evidence of a profuse hemorrhage. The source of hemorrhage was sought and found to be the artery that supplies the appendix. The appendix had been completely severed by the ball, and was floating in the abdominal cavity, held only by the meso-appendix. There were thirteen perforations, two in the transverse colon, one in the cecum, and the remainder in the small intestines. A purse-string linen suture was used to close all perforations. Fecal matter had discharged freely from most of the perforations, and in some instances as much as two teaspoonfuls was wiped away from the opening before the suturing was begun. The intestines were greatly inflated with gas, so much so that it was with the greatest difficulty that they could be replaced and the abdomen closed. No irrigation or flushing of any kind was used. Moist gauze was used freely to wipe out all blood and fecal matter. The peritoneal cavity was drained with plain gauze through two stab wounds, one in each side, and the abdomen was then sewed up.

Postoperative History.—A hot saline enema was slowly given, about one drop to the second; this was continued until one-half gallon had been given. A rest of an hour was allowed, and the hot water was continued for three days, as described above. One drain was removed on the tenth day, and the other on the fourteenth day. The patient was allowed to sit up after the last drain was removed. The highest temperature was 102 F., on the second day, the temperature then gradually declined until the sixth day, when it became normal and remained so until recovery. The patient is now at work and in his usual good health.

CASE OF POISONING BY HEADACHE POWDERS (SHAC).

A. M. ROOKER, M.D.
NIAGARA FALLS, N. Y.

Relative to the article in THE JOURNAL[1] on Stearn's headache cure (Shac), I report the following case of poisoning as the result of the use of this preparation by a patient who recently came under my care:

History.—Mrs. S., aged 45, who had often suffered from headache, but had never previously taken any proprietary remedies for its relief, was induced to take a Stearn's headache wafer by her daughter who had been using them. About half an hour after taking it she began to feel faint and dizzy, and in another half hour had lapsed into total unconsciousness.

Examination.—When seen the patient was still unconscious. The face was somewhat cyanotic, skin was moist, pupils were normal, respiration was slow and shallow, pulse was of fairly good quality though increased in frequency; the pulmonary second sound was greatly accentuated.

Treatment.—Under full doses of strychnin and atropin hypodermatically, rectal injections of black coffee and the application of heat externally, consciousness returned in about an hour, having persisted for about two and one-half hours. The patient remained dull and stupid and somewhat cyanotic for some time. She complained of still having a violent headache and of feeling very weak. The headache was relieved by active purgation, hot mustard footbath and mustard paste to back of neck, but the weakness lasted thirty-six hours longer.

What the outcome might have been without the administration of stimulants I can not say, but of the harmfulness (not "harmless" as Stearns & Co. advertise) of this remedy I am most fully convinced.

1. Oct. 19, 1907, 1381.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month.)

(Continued from page 1607.)

BENZO-FORMOL COMP.

Benzo-Formol Comp. is the word-mark for the Mulford Co. brand of

LIQUOR ANTISEPTICUS, MULFORD.

A liquid said to contain in each 30 Cc. (one fluidounce): Glycerite of boroglycerin, 2.6 Gm. (40 grains); sodium borate, 0.8 Gm. (12 3/5 grains); sodium benzoate, 0.085 Gm. (1 1/3 grains); sodium phenolsulphonate, 0.036 Gm. (3/5 grain); solution of formaldehyde, 0.02 Gm. (1/3 grain); camphor, 0.04 Gm. (2/3 grain); eucalyptol, 0.02 Cc. (1/3 minim); menthol, 0.015 Gm. (¼ grain); oil of gaultheria, 0.055 Cc. (0.9 minim) in a menstruum containing 8 per cent. of alcohol.

Dosage.—Internally from 4 to 8 Cc. (1 to 2 fluidrams). As a wash, douche or spray, 30 Cc. (1 fluidounce) is diluted to 500 Cc. (1 pint) with water.

Prepared by the H. K. Mulford Co., Philadelphia. U. S. trademark No. 51646.

BLANDINE COMP.

Blandine Comp. is the word-mark for the Mulford Co. brand of

PETROLATUM LIQUIDUM COMPOSITUM, MULFORD.

A liquid said to contain in each 30 Cc. (one fluidounce) camphor, 0.09 Gm. (1 1/3 grains); menthol, 0.012 Gm. (0.2 grain); thymol, 0.012 Gm. (0.2 grain); eucalyptol, 0.024 Gm. (0.4 grain); oil of gaultheria, 0.1 Cc. (1.5 minims); hydrastine alkaloid, 0.0015 Gm. (1/40 grain) in a neutral, odorless mineral oil (liquid petrolatum).

Dosage.—As a local application or as a spray.

Prepared by the H. K. Mulford Co., Philadelphia. U. S. trademark No. 51647.

CREMO-BISMUTH.

Cremo-bismuth is the word-mark for the H. K. Mulford Co. brand of

MISTURA BISMUTHI SUBCARBONATIS HYDRATI, MULFORD.

A mixture said to consist of bismuth subcarbonate suspended in water in a finely divided state, each 30 Cc. (one fluidounce) representing the equivalent of 2.6 Gm. (40 grains) of bismuth subnitrate.

Dosage.—4 to 16 Cc. (1 to 4 fluidrams) every two or three hours.

Prepared by the H. K. Mulford Co., Philadelphia. U. S. trademark No. 29335.

METHYL-SANTAL.

Methyl-Santal is the word-mark for the H. K. Mulford Co. brand of

CAPSULA SANTALI COMPOSITA, MULFORD.

Each capsule is said to contain: Methylene blue, 0.06 Gm. (1 grain); oleoresin of copaiba, 0.1 Cc. (1 3/5 minims); oleoresin of cubebs, 0.025 (2.5 minim); oil of sandalwood, 0.09 Cc. (1½ minims); oil of cinnamon, 0.013 Cc. (1/5 minim); oil of nutmeg, 0.005 Cc. (1/12 minim).

Methyl-Santal is put up in soft, ovoid capsules, about 9/16 inch long and about 3/8 inch in diameter, of a dark blue color and having an aromatic odor suggesting cinnamon and sandalwood. Average weight about 0.6 Gm. (9 1/3 grains).

Dosage.—One or two capsules three times daily.

Prepared by the H. K. Mulford Co., Philadelphia. Not patented or trade-marked.

(To be continued.)

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 Dearborn Avenue .... Chicago, Ill.

Cable Address . . . "Medic, Chicago"

Subscription price.....Five dollars per annum in advance

[For other information see second page following reading matter.]

SATURDAY, NOVEMBER 16, 1907.

PHARMACOLOGY AT HOME AND ABROAD.

In this week's issue, under the head of Correspondence, we publish some notes from a correspondent on the status of pharmacology abroad which show the changed conditions there. The attitude of Ehrlich and others in Germany, as described by our correspondent, shows a strong conviction that much more is to be expected from the investigation of drugs; in fact, that their systematic study has scarcely begun, whereas many of those who have devoted so much time to the study of antitoxins, etc., admit that the prospects for advancement along these lines are at present not very bright.

Without wishing to belittle in the least the immense value of bacteriologic work in connection with the discovery of new remedies, and recognizing how much more may be expected of this line of investigation (especially in the most important branch of medicine—prevention), it is still true that in the treatment of disease, whether for relief or cure, ordinary drugs form the chief resource of physicians. The importance of even diphtheria antitoxin is small in comparison with that of such drugs as quinin and the anesthetics.

What is the medical profession of this country doing to encourage research in drugs and the thorough teaching of what is already known concerning them? Almost nothing. Eminent clinicians discourse on the uselessness of drugs, except, of course, chloroform, ether, cocain, quinin, mercury, morphin, digitalis, the iodids, etc.—drugs without which Naunyn declared he would not care to be a physician. These exceptions are treated very much as though they were special gifts of Providence and that similar gifts are not to be expected in the future.

Drugs are too often judged by one criterion: "Will they cure a disease?" Most drugs will not, but their use may lead directly to the saving of life. Antiseptics have cured few people; ether and chloroform may have never cured a single patient. But the use of antiseptic drugs led to antiseptic, and aseptic, surgery; it is difficult to believe the latter would have been developed even at the present time, except for the former. Antisepsis, or asepsis, and anesthesia have made possible modern surgery, of the achievements of which we are never weary of boasting. Looked at from a broad standpoint, it must be admitted that the use of these two classes of drugs has contributed materially to the saving of hundreds of thousands of lives.

While the ultimate aim of medicine is the prevention and cure of disease, physicians are in the meantime compelled to devote most of their energies to the relief of disease. All of these activities are inextricably united to each other, however; thus hexamethylenamin may not only cure a case of cystitis but prevent the spread of typhoid by destroying the organisms in the urine.

It is instructive to inquire how new drugs have been discovered in recent years. Most of them have come from neither the clinician nor the manufacturer, but from the laboratory, and, for the most part, from the pharmacologic laboratory. It is also instructive to inquire who deserve the credit for these discoveries. Most physicians seem to attribute them to the manufacturers who make and sell them, but the real discoveries made by the manufacturers have been few. It is not our desire to discredit the work of manufacturers. They have rendered an inestimable service in perfecting methods of preparation, in improving tests and sometimes in discovering new properties of drugs. The leading ones show a high appreciation of research, and it is to them and not to medical societies or colleges that investigators usually turn for help—such requests are seldom refused. But the essential work, the initiative, has usually come from the strictly scientific laboratory. Chloral, the first of the newer hypnotics, and the discovery of which has stimulated much work, was introduced by Liebreich, professor of pharmacology at Berlin. The same pharmacologist afterward discovered lanolin. The anesthetic properties of cocain were first recognized by von Anrep, working in the pharmacologic laboratory at Würzburg; he recommended its use as a local anesthetic. To Cervello, now professor of pharmacology at Palermo, we owe paraldehyd; to Filehne, then professor of pharmacology at Erlangen, now at Breslau, we owe antipyrin; to Baumann, formerly professor at Freiburg, sulphonal; to Fraser, still professor of materia medica at Edinburgh, both strophanthus and eserin; to Gamgee, the physiologist, and Brunton, the physician and pharmacologist, amyl nitrite; to von Schroeder, then professor of pharmacology at Heidelberg, theobromin; to the physiologists, Oliver, Schaefer and Szymonowicz, the suprarenal gland extracts, and to the pharmacologists, Abel and Crawford, the pioneer work on the isolation of the active principle. Most of the substances mentioned are types of classes. Their discovery has stimulated that of almost innumerable other compounds. Of the drugs introduced in this country, we are apt to forget the work of Professors Novy and Freer which led to the use of the organic peroxids (acetozone, etc.), and of Abel, who had called attention to the hypnotic action of chlorbutanol long before its introduction as "chloretone."

Are not these discoveries sufficient to justify the small amount of money which has been spent encouraging pharmacologic research? We in the United States are

doing little to continue this series of discoveries. We have no institute similar to Ehrlich's institute. Only one or two universities have departments of pharmacology comparable with those of even the smaller German universities. There is no government laboratory supported as is that of the Imperial Health Office at Berlin.

There are several causes for this condition of affairs. One is that the profession has little appreciation of the possibilities of this kind of work. Another is the therapeutic skepticism which prevails in spite of the few great drugs which we possess. This skepticism again has undoubtedly been fostered by the vast number of worthless proprietary drugs and nostrums which have been exploited. The pharmacologist knows how much work the discovery of a single, really new, useful drug involves. But a large class of manufacturers have discovered that it is possible to foist almost anything on the profession—from gypsum as a "tasteless quinin" (used by physicians for years "with excellent results") to the most mysterious "organo-therapeutic" products; skill in advertising is the only asset needed. There are probably tens of thousands of chemical compounds which could be exploited as well as many of those met with in the advertising pages of some medical journals; the possible combinations of these are almost infinite.

The remark of Holmes many years ago that it would be better for the patients, but worse for the fish, if most of the drugs were thrown into the sea, is probably even more true to-day. The vast majority of these drugs have not the slightest excuse for existence. They are a hindrance to real progress. An essential step to the latter is a thorough housecleaning. The Council on Pharmacy and Chemistry is doing much, but its work chiefly bears on the most elementary and obvious (but at the same time a fundamental) part of the problem and consists largely in an endeavor to obtain true statements concerning the composition of the drugs and assurances from the manufacturers that they are not using the physician as a peddler to introduce new "patent medicines" to the public. What a simple proposition it seems—to ask people not to deceive the physician wilfully in his effort to relieve suffering and save life! Yet what an effort it has cost and how tenaciously most of the medical journals cling to the dollars which the advertising of these deliberate falsehoods bring to them! It is hoped that much of this work will before long pass to the police departments, where it properly belongs. Then will come the second line of work: the investigation, by disinterested parties, of the pharmacologic claims of the new drugs. As Cushny pointed out, it is rare for distinctly new drugs to be introduced except by way of the laboratory; the claims made for most of them can be easily tested by laboratory methods. A medical student working under direction could easily examine the claims of the "safety" of many of the new hypnotics, for example. In this way the grain of wheat in the bushels of chaff would be separated.

Then there is the third line of work—the most efficient and permanent, but by far the most difficult—the discovery of really new remedies. This is the kind of work to which Ehrlich, for example, is now devoting his energies. The discovery of one efficient remedy does more than decades of "control;" it is like the rising sun dispelling the mists and fogs of the morning.

CANCER OF THE HEAD AND FACE.

The *Zeitschrift für Krebsforschung*, the official organ of the Central Committee for the Investigation of Cancer, has always encouraged not only laboratory investigation but also the statistical studies which are of such great value in this disease in particular. Through this agency are being accumulated figures on enormous numbers of cases, which rule out the common sources of error arising from exceptional experiences, individual prejudices, and generalization on insufficient basis. Among these papers is one on the features of epithelioma as it occurs about the head, face and neck, which contains much information of interest to practitioners and surgeons.[1] A series of 327 cases of this character observed from 1894 to 1904 at the surgical clinic of Hochenegg in Vienna has been analyzed, with the following results:

Although there were 213 male patients as compared with 114 females, yet with the exception of carcinoma of the lower lip females are quite as often afflicted with cancer of the face as are men. Indeed, so far as cancer of the scalp, temples and forehead is concerned, women are much more commonly affected, this set of statistics giving the proportion as 14 to 1, while the larger collection of Heimann shows 29 men to 99 women. Carcinoma of the external ear and of the cheek occurs somewhat more frequently in men than in women, but with carcinoma of the lip the disproportion is remarkable. In the Vienna clinic there were 106 men to 15 women with lip carcinoma, in Heimann's statistics the proportion was 766 to 91, while investigations by other statisticians show that but from 1.6 to 9.8 per cent. of all cases of cancer of the lip occur in women. Meller believes that these differences are to be explained on the ground of relative exposure to trauma: thus the prevalence of cancer of the scalp and forehead in women he attributes to the practice of the lower class of women going bareheaded, while in men this part of the body is generally protected by the hat; the relative frequency of cancer of the external ear in men is ascribed to the protection afforded to the ears of women by the shawl or other head covering worn in bad weather, etc. Trauma, he believes, plays a very important part in carcinoma of the skin, and in his series he finds an evident relation to trauma in 11.3 per cent. of all cases, while of the 92 patients with cancer of the lower lip 35 were

1. Zur Statistik der Hautcarcinome des Kopfes und Halses, by Anton Meller, Zeit. f. Krebsforsch., 1907 (6), 64.

addicted to smoking a pipe and only in 4 cases could smoking be excluded. Cancer of the skin seems to be a disease of the lower classes; according to Schuchardt, "at the most, but 2 per cent. of all cases of face cancer (including cancer of the lip) occur in the upper classes. Cancer of the breast is found in the homes of royalty, but one will seek there in vain for skin cancer." Presumably the reason for this condition lies in the greater exposure of the poor to weather and to trauma, and to the neglect of trivial chronic lesions which are prone to become malignant. Heredity shows up remarkably seldom in this form of cancer, but 2 of the 327 cases giving a positive history in this respect, and other sets of statistics show much the same feature.

Although the average duration of the disease before the patient submits to operation for cancer of the face is about two years, yet in the case of cancer of the lip operation is sought inside the first twelve months in two-thirds of the cases, because of the more rapid growth and early ulceration of cancers in this location. Of the primary operations performed in the Vienna clinic for cancer of the head, neck and face there was no recurrence within the three year limit in 50 per cent., while of those individuals operated on for recurrences 21 per cent. remained free from further growths. Local recurrence, in and about the scar, is very much more common than glandular recurrence, and metastasis into distant organs and tissues rarely occurs before the patient comes to operation. Cancer of the lower lip is far more dangerous than cancer of any other part of the head and face, for in fully 90 per cent. of the patients operated on the regional glands were already affected, while glandular involvement was present in only from 18 to 43 per cent. of cancers on other parts of the head. The removal of glands enlarged to "pea, bean or walnut size" always gave good results when these occurred only in small groups or singly, but if such glands can be followed down to the clavicle it will usually be found that there are others in the mediastinum where they can not be reached. Glands of larger size are removed only with great danger and seldom with success as regards recurrence. Operation in "inoperable" cases seems to hasten the fatal termination by favoring extension along the opened channels and mutilated tissues, and in the hands of the inexpert operator similar effects are often produced in operable cases, so that Meller admonishes in this manner: "May these figures be a warning to all those who face this disease without sufficient equipment; the knife of the unpracticed, untrained surgeon does more harm than good. For all such a carcinoma should remain a *noli me tangere*."

GOAT'S MILK AND CHILDREN'S HEALTH.

The wave of reform in the milk supply of large cities has done much to reduce the death rate among young children in the summer, and has demonstrated beyond all doubt that much infant mortality and morbidity depends not on mysterious factors but on so simple a fact as the quality of the milk. Smaller towns and country places have not been affected so favorably by this movement as the larger cities, and it seems doubtful whether or not the elaborate measures for the protection of milk from contamination, and especially the icing of it so that whatever microbic content there may be shall not increase in quantity, will be feasible in ordinary country districts. It is true that milk does not have to be transported long distances for the smaller towns, and that the time between milking and consumption is comparatively short, yet even a few hours of warm temperature are sufficient to lead to a great multiplication of the microbic contents of milk and to add to its dangers. Besides, all the means used to keep milk from contamination, and especially such methods as pasteurization, add to the cost of milk, and already there is complaint of the raising of the price and the additional cost for the poor. As a consequence there has been a readiness to investigate other possible sources of milk besides the cow, and among these the goat, because that animal has been very commonly employed for this purpose in the older countries, recently has been attracting attention.

An added reason for seriously considering the question of the more widespread use of goat's milk than has been the custom in this country is that the goat is almost free from tuberculosis. Professor Behring insists that all tuberculosis originates from milk feeding in children. He has not hesitated to declare that even the phthisis of young adults is only the last verse of the song which was sung to them in their milk-feeding days as infants. In this he may be, as many think, exaggerating the real situation. It is probable, however, that there is a certain basis of truth in his contention, and the question of early infection with tuberculosis by milk from diseased cows is not discussed, as it used to be, from the standpoint of its possibilities but from that of the frequency of its occurrence, which is still a matter of dispute. A more extensive use of a milk that would guarantee practically against all possibility of infection from tuberculosis would under the circumstances be eminently desirable and should prove a welcome addition to the present dietary of children.

Some of the reasons that have caused the United States Department of Agriculture to take up the investigation of the goat as a source of milk supply for children are worthy the consideration of physicians in order that they may prepare public opinion for a change in the present mental attitude of the public toward the goat. Ordinarily the goat is looked on as a rather unclean animal, but as a matter of fact the milch goat may be tubbed and toweled and thus easily made perfectly clean. For children's feeding such cleansing is in common use in certain parts of Europe. There even exists the custom in some old country places of applying the children's mouths directly to the goats' udders and thus

preventing all possibility of infection during the process of conveying the milk to the child. In many parts of Europe, as American visitors to Naples doubtless will recall, the goats are driven through the streets to the houses of those who purchase the milk, and thus the ordinary dangers of milk conveyance in vessels or by repeated handling are absolutely avoided.

Each goat produces about half a ton of milk yearly. As this milk is alleged to be one-half again as rich in all the various nutritive elements as cow's milk, it is easy to understand that the little animal has an immense economic value. Hence the term that has been frequently used for the milch goat that she is the poor man's cow. Of course these considerations are not likely to change the present attitude of Americans to the goat within the next few years. It is evident, however, that there is in this animal, which unfortunately has been allowed gradually almost to disappear from this country, a valuable source of food supply for the family generally, but particularly for children. Thus the advantages of this little animal will doubtless bring about at least its reintroduction on a moderate scale, and a more general realization of its value with the rise in popular appreciation of its economic and hygienic qualities.

DEATH AND RESURRECTION AND NEWSPAPER ENTERPRISE.

Death is the lot of all mankind and has been since the beginning of time. Burial under more or less artificial conditions is the ultimate fate of most individuals in civilized countries. To very few, however, is granted the privilege to die and to be prepared for the tomb repeatedly, while the individual who can repeat this performance at widely separated localities, is, indeed, unique. Such a person is a "Mrs. Fred Hartzell." Not only is she remarkable for this peculiarity, but she is also surely the good angel of newspaper reporters, for, whenever news becomes scarce and copy hard to get, "Mrs. Fred Hartzell" immediately dies and is resurrected in some new spot. With startling regularity a reporter arrives on the scene very shortly after her apparent demise and just in time to see her rise up in her coffin to the astonishment and horror of her friends. A telegram is then sent to half a dozen newspapers (generally Sunday editions) and the wondering world is once more informed that "Mrs. Fred Hartzell" has again died and come to life.

In the Chicago *Record-Herald,* Oct. 1, 1907, appears a special telegram from Wheeling, W. Va., dated Sept. 30, according to which "Mrs. Fred Hartzell" was, or is (depending on the latest news from the seat of activities) the young wife of a farmer living near Huntington. Her relatives were bemoaning her death on September 30. A few minutes before the minister arrived to conduct the funeral rites she suddenly sat up and climbed out of her coffin. Whether apprehension over the impending arrival of the clergyman had anything to do with this sudden resurrection is not stated. The telegram further says that there was a rush of mourners for the open air, windows being used as exits. We are unable to see any reason for the somewhat uncomplimentary inference regarding Mrs. Hartzell which might be drawn from the above statement. We may not be in possession of all the facts in the case, however. At any rate the minister "fainted when the pale-faced woman over whose body he had been called to perform services met him at the door." The clergyman was certainly quite justified in this, as such episodes are, to say the least, unique in ministerial experiences.

Practically the same news item appeared in the *Indianapolis Star,* October 6, except that Mrs. Hartzell's death was a few days later, according to the *Star,* than it was according to the *Record-Herald.* So interesting were these reports that inquiry was made of reputable physicians residing near Huntington. A letter received from Dr. T. W. Moore, Huntington, secretary of the West Virginia State Medical Association, says: "I have consulted several of the physicians and business people of this city and no one has ever heard of the occurrence or of a Mrs. Frederick Hartzell living in this vicinity. As Wheeling is 250 miles from Huntington, it is unlikely that an Associated Press telegram would be sent from the former point."

Evidently, lack of recognition of her claims to notoriety had a discouraging effect on Mrs. Fred Hartzell and led her to decide to die no more in Huntington, W. Va. Strange to say, her death in that locality was not recorded in local newspapers, but only in Chicago and Indianapolis papers. Now, appears the item in the Huntington (W. Va.) *Advertiser,* November 6, announcing the death and resurrection of "Mrs. Fred Hartzell," who, in the month intervening since her last appearance in this rôle, had evidently removed to Monterey, Mexico. This time she was evidently not so susceptible to the influence of the approaching clergyman, as the minister had arrived and begun the funeral services before Mrs. Hartzell came to life. Evidently Mrs. Hartzell is acquiring a tolerance for the ministry. Apparently the minister at Monterey, Mexico, was quite as susceptible as the clergyman in Huntington, W. Va., as he also fainted when Mrs. Hartzell sat up in her coffin. The dispatch also states that the pallbearers and friends fled and that only the husband remained to assist Mrs. Hartzell from the coffin. This again carries with it a somewhat uncomplimentary inference, as one is led to assume that Mrs. Hartzell's friends were willing to stay in her vicinity so long as she was dead, but preferred to seek another locality as soon as she came to life. We also note another difference between Mrs. Hartzell's performance in West Virginia and that in Mexico. In West Virginia she died without the aid of a physician, while in Mexico she was "pronounced dead by several physicians."

Evidently Mr. Hartzell is profiting by his former experiences and prefers to take no chances hereafter.

We shall await with interest further news of Mrs. Hartzell's performances, which generally occur about the first of each month.

SYSTEMATIC STUDY OF EDUCATIONAL PROBLEMS.

The growing interest in the study and discussion of educational problems is illustrated well by the recent formation of sections devoted to educational science by both the British and American Associations for the Advancement of Science. In the presidential address before the Educational Science Section of the British Association last summer Magnus[1] points out that much is still lacking before we can speak of a real educational science. We have not yet collected and systematized a sufficient body of facts to furnish data for comparisons and final conclusions for future guidance. Assuming this to be true, what can medical men as such do to promote the upbuilding of a true educational science? Now physicians are especially interested in the medical inspection of schools and school children. Practically every large city in this country now has some form of medical school inspection and the work is being extended in various ways. It is quite self-evident that, as pointed out by Magnus, medical inspection of schools unless carried out on well considered lines laid down by some central authoritative body of experts will not give us, at least not as quickly and economically as possible, the data necessary to associate educational and physical conditions with a view to securing a sound basis for improvement of the training in our schools. As yet there is very little if any actual cooperation and co-ordination in the medical inspection work in our schools. Each city is doing the work largely in its own way, and even the individual inspector too often follows methods that are peculiar to himself. While this rather haphazard form of inspection is better than no inspection it would be decidedly more rational if the work were carried out according to more uniform rates. The problems are, broadly speaking, everywhere the same, namely, to secure for the children the best conditions for physical and mental growth, and in dealing with such large problems as these active, conscious cooperation toward definite ends will certainly accomplish far more than poorly directed individual effort which too often becomes mere routine.

KENTUCKY ACTS ON NOSTRUMS.

In the Medical Economics Department of THE JOURNAL this week appears an account of the action of the Kentucky State Medical Association on the vital question of the use of nostrums by physicians. The State Association adopted a series of resolutions at its recent meeting, endorsing the work of the Council on Pharmacy and Chemistry and requesting county medical societies to secure the active aid of every licensed physician in the state to stop the use and sale of nostrums and of dishonest proprietary medicines. Physicians were requested to obtain and to be guided by the United States Pharmacopeia and National Formulary and the reports of the Council on Pharmacy and Chemistry, to support such medical journals as are willing to assist the profession by freeing their columns of nostrum advertising and to refuse to receive medical journals which do not endorse this movement. The executive officers of the Kentucky State Medical Association evidently assumed that these resolutions meant what they said and that they were intended to be enforced. Accordingly, a copy of the resolutions has been sent to each member of the state association, together with a postal card pledge, which each physician is asked to sign and by which he agrees, so far as possible, to use only preparations found in the Pharmacopeia and Formulary or those approved by the Council on Pharmacy and Chemistry and not to subscribe for nor to receive any medical journal which advertises nostrums or objectionable proprietary preparations. Recalling the effective work done by this state association on the insurance question, it seems highly probable that the nostrum evil will be quickly and definitely settled in Kentucky. The positive position taken by this association, as well as the energetic means adopted for enforcing its decisions, are respectfully commended to other state associations for careful consideration. If all state societies will take similar action, the campaign against dishonest drugs will be speedily and successfully terminated.

THE PHYSICIAN IN POLITICS.

As a rule, the physician fully realizes his obligation as a citizen to take an active interest in the affairs of the community, particularly so far as they concern matters of public health. In the smaller cities and rural districts the doctor naturally finds his influence larger than can be the case in more metropolitan communities, and his responsibility is, therefore, proportionately increased. It is not uncommon to find the physician taking an active part in politics, but the recent election in New Jersey furnished an unusual instance of political activity among the members of the medical profession. No less than seven cities of that state, namely, Paterson, Trenton, Atlantic Highlands, Summit, Rahway, Frenchtown, and Washington, elected physicians as mayors. Evidently the people of New Jersey propose to safeguard their health if it can be done by choosing experts in this line to execute their laws.

THE SCIENCE OF EUGENICS.

Prof. Karl Pearson,[1] in a lecture delivered before the Junior Scientific Club of Oxford University, brought out the importance of the study and application of the science of eugenics to the welfare of people. Briefly, this science consists in the study of man from a biologic standpoint—dealing with "inheritance, selection and fertility in man" and the relation of these factors to racial efficiency. Although this science is comparatively young, there has been collected a large amount of statistical matter bearing on these subjects. The study of heredity

1. Science, Nov. 1, 1907.

1. Popular Science Monthly, November, 1907.

in man, based as it must be largely on figures obtained from old records, seems to be peculiarly difficult, and the elimination of the element of environment almost impossible of accomplishment. Who can say in how far mental or moral qualities good or bad are the result of training or of association with the parents, or a family tendency to tuberculosis—so commonly used as an example of inheritance—a result of a common exposure to infection? We have no desire to minimize the importance of heredity, but it will be seen how easily such figures may exaggerate the truth. As between heredity and environment, Pearson goes so far as to say that "there is no hope of racial purification in any environment which does not mean selection of the germ." Now whether Weismann's theory as to the non-inheritance of acquired characteristics be accepted or not, there can be no doubt of the fact that the environment of parents does affect the characteristics of their offspring, and that a race of children sprung from parents living in sanitary surroundings will be superior to those whose parents were subjected to baneful influences. If the salvation of the race depends solely on the encouragement of multiplication among desirable citizens and the discouragement or prevention of procreation among others, important as these objects appear, it seems doubtful how far it will ever be attained.

Medical News

ARKANSAS.

Diphtheria.—Many cases of diphtheria, with several deaths, have been reported from Bear Creek, Boone County.

Personal.—Dr. William O. Forbes has been appointed a member of the Federal Medical Board, Hot Springs, vice Dr. William T. Wootton, resigned.

To Organize Medical Department.—Col. R. L. Russell, Little Rock, chief surgeon of the Arkansas National Guard, has completed arrangements for the organization of a medical corps based on that of the U. S. Army.

Medical Colleges Open.—The second annual session of the College of Physicians and Surgeons, Little Rock, was opened October 2 with an address by Dr. Joseph P. Runyan, dean of the institution. The first lecture of the course was given by Dr. Keating Bauduy on "Emotional Insanity, with Special Reference to Its Medicolegal Aspect."——The Medical Department of the University of Arkansas, Little Rock, opened for its twenty-ninth annual session, October 2. The address of welcome was delivered by Dr. James H. Lenow, dean of the faculty, and the first lecture was delivered by Dr. Frank Vinsonhaler, professor of ophthalmology and otology.

CONNECTICUT.

Communicable Diseases.—About 20 cases of typhoid fever are reported from New Britain. The supply of milk and water for the city is said to be contaminated.——An increase in scarlet fever is reported from Hartford, where 17 cases developed during September, most of which were in the Eighth ward.

Tuberculosis Board Organizes.—The State Tuberculosis Commission, appointed by Governor Woodruff last summer, met in the capitol October 11, and outlined the campaign for the coming winter. Dr. John P. C. Foster, New Haven, was named as head of the commission and executive secretary; Charles E. Julin, New Haven, secretary.

Personal.—The medical employés of the city of New Haven are as follows: Fire department surgeons, Drs. Norton R. Hotchkiss, James H. J. Flynn, John J. Seibold, C. Purdy Lindsley and William P. Baldwin; health officers, Drs. Frank W. Wright and Dwight M. Lewis; medical inspectors of schools, Drs. Thomas M. Cahill, J. J. Sohane, Henry F. Klenke, Joseph B. Monohan and W. Matthew Kenna; physicians of the poor, Drs. Alfred G. Nadler, Willis H. Crowe, Louis M. Gompertz, Terrence S. McDermott, Frederick N. Sperry and Harry L. Welch; and police surgeons, Drs. Seymour L. Spier, Francis P. Heery, Carl W. Henze and Chauncey S. Lamb.——Dr. J. Hobart Egbert has been elected eye and ear specialist on the staff of St. Joseph's Hospital, Willimantic, and Dr. William E. Cramm, Mansfield Center, a member of the non-resident staff.

DISTRICT OF COLUMBIA.

Celebrates Centenary.—Dr. William M. Starr, on October 14 celebrated his one hundredth birthday anniversary by a banquet to the members of the Oldest Inhabitants' Association.

Medical School Opens.—The University of Georgtown, Medical Department, opened for its annual session October 1. Rev. David H. Buel, S.J., president of the university, and Dr. Frank Baker, acting dean of the faculty, addressed the students.

GEORGIA.

Society Meetings.—The Tri-County Medical Society of Jackson, Walton and Gwinett counties was recently organized at Winder.——Arrangements are being perfected for the organization of the Tenth District Medical Association at Augusta.

Personal.—Dr. Charles F. Benson, president of the Atlanta board of health, has retired. The board met October 4 and passed resolutions of regret.——Dr. William A. Mulherin has been elected professor of diseases of children in the University of Georgia, Medical Department, Augusta, vice Dr. William Z. Holliday.——Dr. M. Ashby Purse, Atlanta, is reported to be ill with typhoid fever.——Dr. A. S. Hasgrove has resigned as a member of the staff of Grady Hospital, Atlanta. ——Dr. Phinizy Calhoun, Atlanta, has returned from Europe.

ILLINOIS.

Coroner's Cases.—The coroner of Cook County reports 365 sudden deaths for October, or 69 more than were reported for the previous month. Of the deaths, 153 were due to natural causes; 40 to railroad accidents; 31 to suicide; 29 to falls; 22 to street car accidents; 21 to homicide; 13 each to burns and scalds and drowning, and 8 to tetanus.

Fires in Hospitals.—A fire occurred in the Kane County Almshouse, Batavia, November 6, which did $25,000 worth of damage and in which 40 insane female patients narrowly escaped death.——A fire at the German Hospital, Chicago, November 5, caused considerable damage and necessitated the removal of 30 patients. Fortunately, through the exertions of the internes and nurses, no casualty occurred.

Society Meeting.—The sixty-eighth annual session of the Military Tract Medical Association was held at Bushnell, October 17 and 18, under the presidency of Dr. John P. Roark of that city. Peoria was selected as the place of meeting in 1908, and the following officers were elected: President, Dr. Samuel C. Stremmel, Macomb; vice-president, Dr. Ernest E. Davis, Avon, and secretary-treasurer, Dr. Ralph C. Matheny, Galesburg.

Not Unprofessional Conduct for Osteopath to Call Himself Doctor.—The attorney-general, in an opinion rendered November 7, holds that an osteopath is not guilty of unprofessional conduct within the meaning of the statute by styling himself "doctor," and that the State Board of Health can not, on this account, revoke his license. The term "unprofessional conduct" is held to mean dishonorable conduct in the practice of his profession.

Personal.—Dr. and Mrs. William S. Holliday and family, Monmouth, have gone to California for the winter.——Dr. John W. O'Haver, who was recently operated on at Lakeview Hospital, Danville, has recovered and resumed practice.——Dr. and Mrs. Thomas C. McCord, Paris, have returned from Europe.——Dr. Joseph E. Assay, Rock Island, while returning from Chicago in an automobile, sustained a painful injury of the leg by running into a bridge, which was being rebuilt, near Erie.——Dr. and Mrs. Alfred D. Kohn, Chicago, have returned from Europe.——Dr. Morton Snow, Chicago, has been obliged to go to Oaxaca, Mexico, for his health.

New Cocain Law.—A bill prepared by C. H. Avery of the State Board of Pharmacy is to be introduced in the legislature. It is intended to prevent the sale of cocain, if this can be accomplished by legal enactment. The bill proscribes the illegal sale of cocain, and also "alpha and beta eucain, or any salt or any compound containing any of the foregoing substances or any of their salts or compounds or derivatives." The only legal sale is on the prescription of a registered physician, which must give the name and address of the person prescribed for, and the date it was filled. It can be filled but once and no copy can be made. Cocain may be sold at wholesale on the written order of any registered druggist, physician, veterinary

surgeon or dentist, but the package must be plainly marked on the outside, showing what it contains and the word "poison" must be printed on the package in red ink. The punishment for violation of the law is a fine of not more than $1,000, or imprisonment in jail for a term of one year, or both.

Legislative Notes.—Senate bill No. 581 and House bill No. 914 would repeal the section of the birth and death act of the state that provides for the payment of 25 cents for each report of birth and death, and for an appropriation of the funds necessary by the various counties. The State Board of Health is opposing the passage of this bill, and the secretary asks the physicians of the state to request their representatives to use their influence against it. He has made a similar request of the secretary of each county society.——The State Board of Health has had prepared and introduced a bill to permit the State Board of Health to admit to examination students who have completed four full years of college work, and to issue them temporary licenses for a period not to exceed 18 months, if they pass the examination. This bill has been prepared in the interests of the students of those colleges that have a course extending over five years. As the bill has only just been introduced, it is questionable whether it will be passed during this session of the General Assembly.

Chicago.

Milk Dealers Fined.—Of 117 retail milk dealers summoned to appear before Judge Scovel, seven were fined sums ranging from $10 to $50, 34 cases were continued and 3 dismissed.

Medical Inspections.—During September and October 126,790 medical inspections of school children were made, and 3,335 were excluded from schools: 341 bacterial examinations and 12,803 vaccinations were made.

Diphtheria Prevalent.—The health department reports that the number of contagious diseases at present existing is normal, with the exception of diphtheria, of which an unusual number of cases has been found. The inspectors who have looked into the matter find that little effort is being made to immunize those exposed to diphtheria.

The Week's Mortality.—During the week ended November 9, 520 deaths were reported, equivalent to an annual death rate per 1,000 of 12.86. Pneumonia caused 77 deaths; consumption, 64; heart diseases, 51; violence (including suicide), 43; nephritis, 30; acute intestinal diseases, 28; diphtheria, 12; scarlet fever, 9; typhoid fever, 6; influenza, 3, and whooping-cough, 2.

Zones of Quiet Around Hospitals.—The City Council, on November 4, passed an ordinance establishing "zones of quiet," extending 250 feet in all directions from each hospital. Within that area "the making, causing or permitting to be made of any unnecessary noise, or the playing of itinerant musicians on the public streets, avenues or alleys, that disturbs or that may tend to disturb the peace or quiet of any of the inmates of the hospital," is declared to be a nuisance. For violation of the ordinance, a fine of from $2 to $50 is provided. These districts are to be marked by signs bearing the legend: "Notice.—Zone of Quiet," placed on lamp-posts or in conspicuous places.

Hospital Notes.—The corporation counsel has refused a permit to the Eye, Ear, Nose and Throat Hospital to erect a twelve-story building on its property at Washington and Franklin streets, on the ground that the code limits the height of hospitals to six stories.——The Bazaar of Nations, given by the Methodist churches of the city for the benefit of the Wesley Hospital, netted $10,000.——At the sixth annual concert for the benefit of the Presbyterian Hospital, November 4, the net proceeds were $2,500.——At the dance and banquet given November 9 by the Jewish Consumptives' Relief Association, nearly $1,500 was raised for the Jewish Home for Consumptives.——Plans for extending the work of the Chicago Charity Hospital were discussed at the annual meeting. During the year, 556 patients were cared for, and the hospital has accommodation for 30 patients. Dr. Franklin H. Martin is chief of the medical staff.——During the last fiscal year, the Provident Hospital and Training School cared for 1,117 patients and treated about 4,000 at its dispensary. The management is making an appeal to its friends to liquidate the hospital debt of $5,000.

INDIANA.

Colored Physicians Organize.—The colored physicians of Indianapolis, October 16, organized a society, known as the Æsculapian Society, to meet once a month, having for its object the education of the colored race along proper hygienic lines. The president is Dr. William E. Brown, and the secretary is Dr. J. O. Puryear.

Epidemic Diseases.—In order to prevent the further spread of diphtheria the public schools of Decatur have been closed. ——The health authorities have closed the Grant school, three miles southeast of Fairmount, on account of diphtheria.——Fort Wayne reports 10 cases of diphtheria.——Smallpox is reported from Jackson Township, Parke County, where 8 cases have developed and 16 individuals are under observation.

Sanitary Rules for Factories.—According to rules adopted by the State Board of Health, regulating the canning of goods in the state, it is made unlawful for the canneries to employ persons afflicted with cancer, tuberculosis or other contagious disease, or persons suffering from sore hands. The rules also provide that the employés shall wash their hands before and after work, and that all floors must be of cement or heavy planks, so that they can be flushed with water each day.

IOWA.

Communicable Diseases.—The fifteenth case of diphtheria in Council Bluffs since August 1 has been reported.——A number of cases of scarlet fever of mild type are reported from Colfax Township.——Trichiniasis has appeared among the students of Iowa College, Grinnell, where 10 or 12 cases are reported of relatively mild type.

Society Meeting.—The physicians of the second district of Iowa met in Davenport, October 15, and organized the Second District Medical Society. An initial program was given and the following resolution was adopted:

Resolved, That the Second District of Iowa Medical Society, realizing the great need of a national department of health, unanimously recommends to its congressman and to the senators of Iowa, that they use their influence in seeking its establishment.

The following officers were elected: President, Dr. William L. Allen, Davenport; vice-president, Drs. Sugg, Clinton, and Jasper L. Augustine, Ladora; and secretary-treasurer, Dr. Lawrence W. Littig, Iowa City.

Personal.—Dr. W. J. Neuzil, Cedar Rapids, has been appointed assistant house physician at the hospital of the Soldiers' Home, Marshalltown.——Dr. P. J. Farnsworth, Iowa City, has presented a valuable collection of fossils and geologic specimens to the state university.——Dr. Hamilton P. Duffield, chief surgeon of the Iowa Soldiers' Home, Marshalltown, is reported to be seriously ill.——Dr. Harry E. Kirschner, formerly medical director of the Grand View Sanatorium, Oil City, Pa., has been appointed superintendent of the new Iowa State Sanatorium at Iowa City, and will assume charge about December 1.——Dr. Rosa M. Upson Liebig, humane officer of Marshalltown, has been appointed special agent of the Woman and Child Labor Commission under the United States Department of Commerce and Labor, Washington.

KANSAS.

Communicable Diseases.—Typhoid fever is more prevalent than any other communicable disease in the state. The greatest number of cases have been reported from Coffey and Wyandotte counties.——A number of cases of smallpox are reported in Iola.——On account of the prevalence of diphtheria at Geuda Springs, the schools of that place have been closed until the disease can be stamped out.

Southwest Physicians Organize.—On October 9 the physicians of Southwestern Kansas, in session at Ashland, formed an organization to be known as the Southwestern Kansas Medical Association; 14 counties were represented. The rules for admission were made to conform to those of the state medical society and of the American Medical Association. The following officers were elected: President, Dr. R. C. Clapp, Coldwater; vice-president, Dr. F. I. Dodge, Ashland; secretary-treasurer, Dr. Cornelius B. Rogers, Coats. The application for membership in the association provides that the applicant, if accepted, will practice strictly ethical medicine, and do all possible to elevate and increase the efficiency of the profession.

MAINE.

Medical Society Meeting.—At the deferred annual meeting of the Cumberland County Medical Society the following officers were elected: President, Dr. William L. Cousins; vice-president, Dr. Owen P. Smith; secretary, Dr. Edwin W. Gehring, and treasurer, Dr. Harold A. Pingree, all of Portland.

Personal.—Dr. John C. Caldwell, Buckfield, was thrown from his carriage October 14, fracturing his leg above the ankle.——Dr. Harris C. Burrows, house physician of the French Sisters of Charity Hospital, Lewiston, has been appointed a member of the staff of the State Hospital for the Insane, Augusta.——Dr. Walter S. Stinchfield suffered the loss of $1,000 recently by a fire which destroyed his office at Skowhegan.

Committee Appointed.—The following committee on reorganization of the Maine Medical Association has been appointed: Drs. Charles E. Williams, Auburn; Thomas S. Dicki-

son, Houlton; Owen P. Smith, Portland; Henry B. Palmer, Farmington; George A. Phillips, Bar Harbor; Carroll W. Abbott, Waterville; John E. Walker, Thomaston; George H. Coombs, Waldoboro; Albert L. Stanwood, Rumford Falls; Bertram L. Bryant, Bangor; Crowell C. Hall, Dover; Eben J. Marston, Bath; Floriman J. Taylor, Pittsfield; Russell D. Walton, Frankfort; Frank L. Shaw, Machias, and Walter T. Goodale, Saco. Dr. William L. Cousins, Portland, has also been appointed a representative to the National Legislative Council.

MARYLAND.

Sanatorium Land Purchased.—Health Commissioner James Bosley and other physicians have purchased a tract of land near Ellicott City, on which they propose to erect a sanitarium.

Physician Convicted.—Dr. Isaac H. Gardner, Baltimore, is said to have been convicted on the charge of performing a criminal operation and to have been sentenced by Judge Dobler of the Criminal Court to five years' imprisonment in the penitentiary.

Faculty Changes.—Dr. J. Frank Crouch has been appointed professor of materia medica and diseases of the eye and ear, in the Baltimore Medical College, to succeed Dr. George Reuling; Dr. Charles O'Donovan has been elected professor of therapeutics and diseases of children; Dr. G. Milton Linthicum, professor of physiology and diseases of the rectum; Dr. Edward L. Whitney, professor of physiologic chemistry and pharmacy, and Dr. Clyde A. Clapp, lecturer on diseases of the eye and ear.

Baltimore.

May Remove Tuberculosis Patients.—The city solicitor, in reply to a request of the health commissioner, has given an opinion that the latter has power to remove patients suffering from tuberculosis from tenements, hotels and boarding-houses to hospitals.

Personal.—Dr. Henry M. Hurd and family have returned after an absence of a year spent in Cuba, Mexico and Europe. ——Dr. R. Tunstall Taylor was operated on for appendicitis November 5.——Dr. George L. Wilkins has been reelected physician for the jail.——Dr. J. Hall Pleasants has been appointed chairman of the supervisors of the city charities.——Dr. C. Hampson Jones has been reappointed assistant health commissioner at a salary of $3,000; Dr. Thomas L. Richardson, assistant commissioner in charge of quarantine, and Dr. William R. Stokes, city bacteriologist.

MASSACHUSETTS.

Charitable Bequests.—The following bequests were contained in the will of the late Miss Florence Lyman, Boston: Carney Hospital, $30,000; Free Home for Consumptives, Boston, $15,000; Massachusetts Charitable Eye and Ear Infirmary, $10,000, and Massachusetts General Hospital, $5,000.

Personal.—Dr. George H. Howe, Lawrence, has returned from an eighteen months trip of scientific exploration in Alaska and the country to the north.——Dr. Herbert C. Emerson, Springfield, has been appointed medical inspector for the fourteenth district and has resigned as member and clerk of the city board of health and health physician.

Health Boards Meet.—The Massachusetts Association of Boards of Health held its quarterly meeting at the Hotel Brunswick, Boston, October 31, at which papers were presented by Dr. E. Channing Stowell, Boston, on "The Possibilities of a Clinical Laboratory in a Country Town in Relation to Public Health Work," and Prof. James O. Jordan, Boston, on "Observations on the Present Day Milk Situation."

Communicable Diseases.—The board of health of Worcester reports that the death rate of the state from diphtheria is 2.47 per 10,000, and that the death rate of Worcester itself from this cause is 8.30 per 10,000. During the last 14 months 127 deaths from the disease occurred in the city.——Typhoid fever is reported to be more prevalent in New Bedford this year than at any similar period for the last two or three years.

Society Meeting.—At the fifty-fourth annual meeting of the Thurber Medical Association held at Milford, October 17, Dr. Charles H. Randall, Franklin, was elected president; Dr. Halbert L. Keith, Milford, vice-president; Dr. Ambrose J. Gallison, Franklin, secretary; Dr. Charles B. Hussey, Franklin, treasurer; Dr. John M. French, Milford, librarian; Dr. William J. Ledbury, Uxbridge, orator, and Dr. Frank T. Harvey, Milford, alternate.

Judge Finds Loop Hole in Medical Practice Law.—The osteopaths found a friend in Judge Stevens in the Superior Court, November 1, in the case of Henry Daniels, an osteopath of Brockton, arrested some time ago on complaint of the State Board of Registration, because he used the title of "doctor" and "osteopath physician." At the preliminary hearing Daniels was found guilty and fined $100. He took an appeal, his defense being that as an osteopath he was exempt from the provisions of the act, inasmuch as medicine was not used by him in the cure of diseases. This claim was sustained by the decision of Judge Stevens.

Tuberculosis Notes.—The Boston Board of Aldermen has authorized a loan of $17,000 for the purpose of erecting temporary buildings for consumptives on the grounds of the Consumptives' Hospital at Mattepan.——The South Boston Anti-Tuberculosis Society has issued the following program of practical talks on tuberculosis, given under its auspices at the Municipal Court Building, Dorchester and Fourth Streets: "Tuberculosis in General," Dr. Herbert J. Keenan, November 6; "Home Treatment of Tuberculosis," Dr. William H. Ruddick, December 11; "Prevention of Tuberculosis," Dr. James S. MacDonald, January 1; "Tuberculosis in Children," Dr. Marcellus Reeves, January 31; "How Tuberculosis Is Acquired," Dr. Alfred T. Dalrymple, February 28; "Tuberculosis and Quackery," Dr. William J. Sheehan, March 16; and "The Conquest of Tuberculosis," Dr. Edward A. Tracy, on April 1.

MICHIGAN.

Hospital Changes Name.—Articles of incorporation have been drawn whereby the Kalamazoo Hospital will be known in the future as the People's Hospital, and under the new management it will no longer be a private hospital, but will be a charitable institution, conducted entirely on this basis under the laws of the state.

Society Meeting.—At the annual meeting of the Montcalm County Medical Society at Edmore, October 3, the following officers were elected: President, Dr. John Avery, Greenville; vice-presidents, Drs. Francis R. Blanchard, Lakeview; William P. Gamber, Stanton; Jay O. Nelson, Howard City, and Robert H. Blaisdell, Sheridan, and secretary-treasurer, Dr. Horace L. Bower, Greenville.

MINNESOTA.

Health Department Appropriations.—The health department of Minneapolis has asked appropriations for this year of $105,573.85, or $20,000 more than for last year. Of this $41,500 is asked for the collection of garbage and $14,400 for the disposal of the same.

Associations Meet.—At the annual meeting of the Wright County Medical Association, held in Buffalo, October 12, Dr. Alfred M. Ridgway, Annandale, was elected president; Dr. Carl L. Larsen, Buffalo, vice-president; John J. Catlin, Buffalo, secretary, and Dr. Arthur L. Hill, Monticello, treasurer.——The second annual meeting of the First District Medical Society will be held in Crookston, November 7.

Personal.—Dr. Henry M. Bracken, Minneapolis, secretary of the State Board of Health, has been elected president of the State Embalmers' Examining Board.——Dr. David D. Hilger has been appointed as first assistant city and county physician of St. Paul, and Dr. Adolph Stierle, second assistant.——Dr. James W. George, Aitkin, has been appointed coroner of Aitkin County.

MISSOURI.

Society Meetings.—At the meeting of the Hodgens Medical Society held in Nevada, October 3, Dr. Thomas B. M. Craig, Nevada, was elected president; Dr. Gail D. Allee, Lamar, vice-president, and Dr. Samuel A. Johnson, Nevada, secretary.——The fall meeting of the Southwest Missouri Medical Society will be held in Springfield, November 7 and 8, under the presidency of Dr. Green B. Darrell, Republic.

In the Hands of the Law.—A. F. Peeler, St. Louis, is said to have pleaded guilty to practicing after revocation of his license, and to have been fined $50.——Edward H. Wick, St. Louis, is said to have pleaded guilty to representing himself to be a physician and to have been fined $50. The fine was stayed. ——Harley Earl Codger, charged with a similar offense, did not appear and his bond of $2,000 was declared forfeited.——Samuel Harwood, St. Louis, is said to have been found guilty, September 20, of performing a criminal operation, and to have been sentenced to serve six months in the workhouse and to pay a fine of $100.

Honored Guests.—Dr. Kenneth W. Millican was the guest of honor at a farewell banquet given by his medical friends of St. Louis, November 8. About 50 were present at the banquet and Dr. Warren B. Outten officiated as toastmaster. Dr. James M. Ball responded to the toast, "The Man We Honor, and Why We Honor Him;" Dr. Joseph R. Lemen to "Dr. Millican as a Friend;" Dr. Louis C. Bosliniert to "Dr. Millican as a Scholar;" Dr. Louis M. Warfield to "Dr. Millican as a Medical

Editor;" Dr. Robert M. Funkhouser to "THE JOURNAL of the American Medical Association;" Dr. Otto A. Wall, Sr., to "Why We Regret to Lose Him," and Dr. John C. Morfit, president of the St. Louis Medical Society of Missouri, to "Our Wishes for His Future." Dr. Millican was given a handsome gold watch. ——At what was said to be the largest meeting of the St. Louis Medical Society of Missouri ever held, the new Section of Medicine of that Society was opened November 9 with an address on "The Fundamental Principles of Therapeutics," by Dr. John H. Musser, Philadelphia. On the evening preceding the meeting Dr. Musser was the guest of honor at a dinner at the St. Louis Club, and on the following evening was entertained at lunch by Dr. Fischel and was honored with a reception at the house of Dr. Elsworth Smith, Jr.

NEBRASKA.

Personal.—Dr. Harry M. McClanahan, Omaha, has been studying in Dresden, and has now gone to London.——Dr. Carlton K. Chubbuck is reported to be seriously ill at his home in Tecumseh.

Communicable Diseases.—Smallpox is reported to be prevalent in and around Bennington.——In the Brown Park school, South Omaha, three cases of smallpox have been discovered. ——City Physician William H. Slattery of Lincoln has isolated six Japanese railroad laborers, who were found to be suffering with beriberi.

State Board Election.—At a recent meeting of the State Board of Health in Beatrice for reorganization, the following officers were elected: President, Dr. William T. Johnson, Pawnee City; vice-president, Dr. George H. Brash, Beatrice; secretary, Dr. Ernest J. C. Sward, Oakland, and treasurer, Dr. Sherman F. Ashby, Fairmount.

NEW JERSEY.

Free Pasteur Treatment.—The Orange Health Board announces that it will furnish Pasteur treatment free to those who were bitten by a supposedly rabid dog in that city a few weeks ago.

Typhoid Fever Epidemic.—Roebling is reported to be suffering from a severe epidemic of typhoid fever. About 50 cases are said to exist, and the water and food supplies are being inspected.

New Hospital Proposed for Atlantic City.—It is stated that arrangements have been made for the erection of a fireproof hospital in Atlantic City, for the treatment of contagious diseases. The institution will comprise three buildings and will cost about $92,000.

Personal.—Dr. William B. Keasbey, Perth Amboy, has moved to Los Angeles, Cal.——Dr. and Mrs. William S. Dodd, Montclair, have returned to their field of labor in Cæsarea, Asia Minor, where Dr. Dodd is chief of staff of the American Hospital.——Dr. Leo M. Becker has been elected president, and Dr. Paul Ranschembach, secretary, of the dispensary staff of St. Joseph's Hospital, Paterson.——Dr. Henry Chavanne, Salem, has been appointed department inspector of the Grand Army of the Republic.——Dr. William S. Disbrow has resigned as a member of the Newark Board of Health.

NEW YORK.

Cancer Increasing.—Dr. Eugene H. Porter, State Commissioner of Health, states that there have been more deaths from cancer so far this year than for the same period last year. It was stated, at the New York Skin and Cancer Hospital, that more cases had been treated in the past ten months than in any previous year, the average being about 800 a month. The death rate in 1905 was 714 per 1,000,000 population, as against 694 in 1904.

Society Meetings.—At the first annual meeting of the Third District Branch of the Medical Society of the State of New York, held in Albany, October 22, Dr. Hermon C. Gordinier, Troy, was elected president; Dr. J. Lasalle Archambault, Cohoes, vice-president; Dr. Henry K. Shaw, Albany, secretary, and Dr. Daniel Connelly, Kingston, treasurer.——The Northern New York Medical Association held its annual meeting in Malone, October 22, and elected the following officers: President, Dr. William C. Smith, Winthorp; vice-president, Dr. Percival F. Dalphin, Malone; secretary, Dr. Alfred G. Wilding, Malone, and treasurer, Dr. George H. Oliver, Malone.

New York City.

Hospital Addition Opened.—The addition to the Hospital for Deformities and Joint Diseases, 1917 Madison Avenue, was dedicated with appropriate exercises, November 9.

Fire in the Hebrew Home.—A fire broke out in the Montefiore Home for Chronic Invalids in One Hundred and Thirty-eighth Street. Many of the patients were carried out by members of the house staff and orderlies. The damage was about $3,000.

Anniversary Meeting of Academy.—The New York Academy of Medicine will hold its annual meeting and reception, November 29. The anniversary discourse is to be delivered by Col. William C. Gorgas, deputy surgeon general, U. S. Army, and chief sanitary officer of the Isthmian Canal Commission, on "Sanitation of the Canal Zone."

New York Hospital Finds Property.—Efforts of the Department of Water Supply, Gas and Electricity to lay mains through Thomas Street from Broadway to Church Street, brought out the fact that the city had no authority over the ground in question, but that it belongs to the New York Hospital. More than half a century ago the property was the site of the hospital, and not only Thomas Street, but the buildings on either side of the street, belong to the authorities of the New York Hospital.

OHIO.

Anti-Expectoration.—One thousand placards, admonishing against the dangerous habit of expectorating on the sidewalk or in other public places, have been put up in Columbus through the efforts of the local anti-tuberculosis society.

Misuse of the Mails.—"Dr." Marie Kollock, a beauty specialist of Cleveland, is said to have been tried and found guilty in the United States District Court on the charge of misuse of the mails. This individual had a mail-order massage office and was given a sentence of 30 days in the county jail.

Hospital Notes.—The commissioners of Montgomery County have made a semi-annual appropriation to the Miami Valley Hospital and St. Elizabeth's Hospital, giving each $625.——A house in Fremont, containing 14 rooms, which is to be furnished and equipped as a public hospital, has been leased by Dr. Sherman McKenney.

Board Sustained in Making Exception in Reciprocity Agreement with Illinois.—The governor and attorney-general have sustained the State Board of Medical Registration in refusing a certificate to practice medicine in Ohio to Charles C. Faws, M.D., of Bowling Green, Ohio. Faws is a graduate of the Toledo Medical College, 1904, and is said to have repeatedly failed to pass the Ohio state examination. Finally, in January, 1906, he appeared before the Illinois State Board of Health, passed the examination and secured a state certificate. This he presented to the Ohio board and under the reciprocity agreement demanded an Ohio certificate, which the board refused to give.

OREGON.

Healer Fined.—W. E. Mallory, who professes to heal diseases by electricity, was arrested October 16 on the complaint of the city health officer of Portland for failing to make a report of a case of contagious disease he was attending. He is said to have been sentenced to pay a fine of $20 for violating the city ordinance.

School Inspection.—After much discussion 25 Portland physicians have volunteered to donate their services to the city as inspectors of public schools. A committee composed of Drs. William M. Campbell, Robert H. Ellis, William C. McKechnie, R. S. Stearns, A. Watt Botkin and Calvin S. White was appointed to outline a general plan under which the school medical inspectors will operate.

PENNSYLVANIA.

Hospital for Miners.—A valuable site has been donated by the Philadelphia & Reading Coal and Iron Company and W. C. McConnell of Shamokin, Pa., for the erection of a hospital for the benefit of the 10,000 miners who are employed in that section of the state. The site is between Uniontown and Shamokin, and was accepted by the state commission, November 7.

Pittsburg School Children Inspected.—The pupils of the public schools of Pittsburg are inspected by physicians under the supervision of the bureau of health. Twelve physicians and a corps of nurses have volunteered their services to Dr. James F. Edwards, superintendent of the health bureau, and they are making careful examinations of the public school pupils in order to determine the number that are suffering from defective sight, hearing and other physical ills.

Philadelphia.

New Hospital Opened.—The Chestnut Hill Hospital, on Germantown Avenue, was opened October 19 and is ready for the reception of patients. Dr. Radcliffe Cheston is president and surgeon-in-chief. The new hospital has 10 private rooms and ward accommodations for 20 persons.

Ground for Hospital.—One lot 40x100 feet, and another 20x100 feet, have been procured by Dr. James A. Kelly for an addition to be erected to St. Mary's Hospital. It is said that a five-story addition to the hospital will be built, to contain quarters for the nurses and house physicians, and 30 private rooms for patients.

Diphtheria Closes School.—The Samuel B. Huey public school was placed under quarantine November 8, on account of the presence of diphtheria. Eleven cases of the disease have occurred in pupils who attended the school during the last two weeks. All children attending the school were carefully examined by the health inspectors of the bureau of health before being sent home. The buildings were thoroughly disinfected.

Health Report.—The deaths reported for the week ended November 9 numbered 435, a decrease of 30 from the last week, and a decrease of 39 as compared with the corresponding week of 1906. The principal causes of death were: Typhoid fever, 6; diphtheria, 5; consumption, 35; cancer, 27; apoplexy, 20; paralysis, 8; heart disease, 51; acute respiratory disease, 54; enteritis, 14; appendicitis, 4; Bright's disease, 47; premature birth, 14; congenital debility, 6; suicide, 6; old age, 7; accidents, 21, and marasmus, 4. There were 222 cases of contagious diseases reported, with 12 deaths, as compared with 223 cases and 30 deaths in the preceding week.

Personal.—Dr. Philip B. Hawk, formerly director of the laboratory of physiologic chemistry in the University of Pennsylvania, has been elected professor of physiologic chemistry in the University of Illinois, and Dr. T. S. Rutherford has been elected research assistant in the physiologic laboratory of the same institution.——Dr. Edward Martin was the guest of honor at the annual meeting of the Northumberland District Alumni Association of the University of Pennsylvania, held in Sunbury, November 1.——Dr. J. Nicholas Mitchell, secretary of the commitee on lunacy of the State Board of Charities, has resigned, to take effect November 12.——State Health Commissioner Samuel G. Dixon has been appointed by the Secretary of the Treasury to represent this country as an official delegate to the Third International Sanitary Convention of the American Republics, to be held in the City of Mexico, December 2.——Dr. Oscar Abrahamson has had conferred on him the Order of the Golden Cross by the king of Spain, in appreciation of his work in aiding Spanish subjects in all parts of the world.——Dr. J. Victor Wilson was recently thrown from his carriage and painfully injured.——Dr. Joseph M. Goldberg sailed for Europe October 30.

Tuberculosis Exhibition.—Arrangements are being rapidly carried on to completion by the Pennsylvania Society for the Prevention of Tuberculosis for an exhibition which is to be held in this city from November 20 to 30. The speakers who have already been assigned places on the program are as follows: November 20, Dr. Talcott Williams and Dr. Livingstone Farrar of New York; November 21, Dr. Samuel McC. Hamill; November 22, Dr. Joseph Pratt; November 23, Dr. Samuel G. Dixon, state health commissioner, and Dr. Joseph S. Neff of the Department of Health and Charities; November 24, Dr. Ward Brinton; November 25, Dr. Lawrence F. Flick of the Henry Phipps Institute, and Miss Mary Richmond of the Society for Organized Charity; November 26, Dr. E. J. Lupin and Rabbi P. L. Levinthal; November 27, Dr. S. A. Knopf of New York; November 29, Dr. Ignazio Cortese, and November 30, Dr. Martin Brumbaugh, superintendent of the public schools. One of the plans for the exhibition is to have nurses assigned from the various city hospitals to aid in demonstrating the latest methods of treatment. Another important phase of the society's work is the course of popular lectures for working people which is being warmly supported by labor unions of the city. Other news on this subject will be found under "General News" in this issue.

TENNESSEE.

Tuberculosis Hospital.—The board of health of Nashville has planned the construction of a small house to cost about $5,000, especially adapted to the isolation of pauper tuberculous patients in the city.

Contagious Diseases.—During the first quarter of October there were more than 100 cases of scarlet fever reported in Knox County.——A number of cases of typhoid fever are reported in the western part of Knox County, due to milk supplied by a dairyman whose family was suffering from the disease.——Diphtheria is reported to be prevalent at Germantown.——Scarlet fever has again made its appearance at Gallatin.——A number of cases of scarlet fever are reported in the neighborhood of Riddleton and Dixon Springs.

TEXAS.

Personal.—Dr. William A. Duringer, Fort Worth, was recently elected president of the St. Louis & San Francisco Railway Surgeons' Association.——Dr. Reve H. Huvelle, Dallas, has been appointed special oculist to examine inmates of state institutions.——Dr. R. K. Cole, Dallas, sailed from Manila for home, November 1.

Society Meeting.—At the second semi-annual meeting of the Northeast Texas Medical Association, held in Clarksville, October 8, the following officers were elected: President, Dr. Thomas S. Ragland, Gilmer; vice-presidents, Drs. Gavin Watson, Clarksville, and Nettie Klein, Texarkana; secretary, Dr. R. H. T. Mann, Texarkana; treasurer, Dr. Charles A. Smith, Texarkana; and censors, Drs. Samuel Corley, Clarksville, and T. F. Kittrell, Texarkana. The next meeting of the association will be held in Texarkana in April next.

Health Conference.—At the office of the mayor of Galveston, October 16, a conference was held between the representatives of the State Health Department, the city health department and the commercial organizations of Galveston to consider measures for the prevention of the entrance of bubonic plague into the state through the port of Galveston. It was decided that the mayor should write letters to the health authorities of New York, New Orleans, Baltimore and Mobile, and to Surgeon-General Wyman, P. H. and M.-H. Service, to see what measures are being taken and what measures would best be taken to prevent the possibility of the disease entering Texas.

UTAH.

Typhoid in Salt Lake City.—During the first 18 days of October 34 cases of typhoid were reported in Salt Lake City. The majority of the cases are said to be due to the use of wells of the old-fashioned kind in the low-lying parts of the city.

District Society Meeting.—On September 27, at Logan, the First Councilor District Medical Society was organized, with the following officers: President, Dr. Ezra C. Rich, Ogden; vice-president, Dr. Gilbert W. States, Franklin, Idaho, and secretary, Dr. Eugene H. Smith, Ogden.

Want Same Fees.—The Utah County Medical Society, at its recent session in Provo, adopted a resolution favoring the same fees for services as city and county quarantine physicians as are paid in private practice. The society also adopted the state society resolution as to the $5 fee for life insurance examination.

Sues to Revoke License.—At the instance of the State Board of Examiners of Utah, the attorney of Salt Lake County on October 9 commenced an action to revoke the license issued to Earl S. Beers, "the boy phenomenal." The court is also asked to issue a perpetual injunction against this individual practicing medicine in the state.

WEST VIRGINIA.

Society Meeting.—At the annual meeting of the Grant-Hampshire-Hardy-Mineral Medical Society held at Keyser September 21, the following officers were elected: President, Dr. Percival Lantz, Alaska; vice-presidents, Drs. Glenn Moomau, Petersburg; George H. Thomas, Romney; Hamilton McS. Gamble, Moorefield, and Z. Troxell Kalbaugh, Piedmont, and secretary-treasurer, Dr. W. Holmes Yeakley, Keyser. Dr. J. N. McCormack, Bowling Green, Ky., delivered an address on "Things About Doctors Which Doctors and Other People Ought to Know."

GENERAL.

American Health League.—The Public Health Defense League will hold its annual meeting at the Academy of Medicine, 17 West Forty-third Street, New York City, at 2 p. m., November 18. Since this body and the Committee of One Hundred on National Health, formed under the auspices of the American Association for the Advancement of Science, are both working for the same common ends and by similar methods of work, a plan of consolidation has been approved by the officers of both and will be submitted to the members for final approval, November 18. The plan provides for an American Health League under the auspices of the Committee of One Hundred. The members of the Public Health Defense League will be made members of the American Health League. The officers believe that the proposed action will make certain the establishment of the strongest health organization in the world.

Practicing Under a Stolen License.—From Dr. E. J. C. Sward, secretary of the Nebraska State Board of Health, we have received the following information: Dr. W. C. Nolte,

Dazey, N. D., a reputable practitioner of medicine, some time during the past year lost his Nebraska license. This was the original Nebraska license No. 3749 (Ex.) issued Aug. 10, 1904. On discovering the loss of the original after a slight fire scare several months ago, Dr. Nolte asked for and received a duplicate copy. Recently, however, it was discovered that a man holding the original license was practicing in Concord, Neb., making free use of the name of Dr. Willis Clever Nolte. After due investigation the Nebraska board summoned the Concord man to appear in person before it. Instead of doing so he sent the following letter:

CONCORD, NEB., 11/5/7.

State Board of Health, Lincoln, Neb.

Gentlemen:—Your order of yesterday was received last night. I feel very sorry that I can not comply with your request as I am leaving to-day for Pennsylvania, where I expect to practice my profession.

After getting domiciled there, I will forward to you my Nebraska state license as I shall have no further use for same, not intending ever to return to Nebraska. Yours respectfully, DR. NOLTE.

The attention of all state boards is called to this item lest other attempts be made to practice under this stolen license.

International Tuberculosis Congress.—Arrangements are progressing for this congress, which is to take place in Washington Sept. 21-Oct. 12, 1908. At a meeting of the committee of arrangements in New York, October 28, Dr. Lawrence F. Flick, Philadelphia, chairman, who has recently returned from abroad, reported his visits to the International Conference on Tuberculosis in Vienna and to the International Congress on Hygiene and Demography at Berlin. More than a thousand delegates were registered at each. The leading men in both associations are looking forward with enthusiasm, Dr. Flick said, to the meeting in Washington, next year, and about four hundred of the members of the foreign organizations may be expected to attend. The conference selected this country as its place of meeting in 1908 just as the congress did two years ago. The conference and the congress are two distinct organizations. The International Conference on Tuberculosis meets every year and keeps up a continuous organization with headquarters in Berlin. The International Congress on Tuberculosis meets once in three years and does not maintain an international bureau in the intervals. Dr. Flick stated that at the international conference interest centered especially in the time-worn subject of the routes of invasion for the tubercle bacillus. It seems to have been demonstrated that the disease may be contracted by both the respiratory route and the alimentary route. Though this does not make us much wiser in a practical way, still it is somewhat comforting to know that the respiratory route is less important than it was once thought to be. On the other hand that information is compensated by the importance of the alimentary route. Dr. John S. Fulton, secretary-general, reported that ten distinguished foreigners have consented to give special addresses: Dr. R. W. Philip, Edinburgh; Dr. C. Theodore Williams, London; Dr. Arthur Newsholme, Brighton, England; Dr. C. H. Spronck, Utrecht, Holland; Dr. Karl Turban, Davos-Platz, Switzerland; Dr. Gotthold Pannwitz, Charlottenburg; Dr. Emil von Behring, Marburg; Dr. A. Calmette, Lisle, France; Dr. Maurice Letulle, Paris; and Dr. S. Kitasato, Tokio, Japan. Various foreign countries will be represented by exhibits as well as by delegates. Dr. Fulton also reported that the governors of twenty-three states had lent official auspices to the congress, insuring official representation and an active organization in each of these states. State committees have been appointed in nearly all of the states. Several have organized and are earnestly at work. The California committee has organized with Dr. N. K. Foster, Sacramento, chairman, and Dr. F. M. Pottenger, Los Angeles, secretary. The committee for Maryland contains the names of Drs. W. S. Thayer, chairman; M. L. Price, secretary; W. H. Welch, H. B. Jacobs, Charles O'Donovan, Louis Haman, J. S. Ames, James Bosley, H. W. Buckler, C. H. Jones, Hiram Woods, and Dr. C. M. Ellis, of Elkton. The Illinois committee includes the following physicians: Drs. G. W. Webster, W. A. Evans, T. B. Sachs, W. L. Baum, J. A. Denny, Frank Billings, R. H. Babcock, E. A. Gray, L. Hektoen, H. B. Favill, A. C. Klebs, J. A. Robinson, E. A. Ryerson, N. S. Davis, C. L. Mix, W. E. Quine, A. L. Craig, J. O. Cobb and Finley Ellingwood, Chicago; and Drs. J. W. Pettit, Ottawa; L. C. Taylor, Springfield; W. R. Schussler, Orland; J. A. Egan, Springfield; A. E. Smith, Freeport; C. H. Merritt, Alton; R. E. Niedringhaus, Granite City; P. H. Wessel, Moline; Henry Rickings, Rockford; J. C. Sullivan, Cairo, and J. T. Percy, Galesburg. The following have been elected officers of the Pennsylvania State Committee on the International Tuberculosis Congress: Chairman, State Health Commissioner Samuel G. Dixon; vice-chairman, Dr. Charles J. Hatfield, president of the Pennsylvania Society for the Prevention of Tuberculosis; secretary, Wallace Hatch, who is also secretary of the Pennsylvania Society for the Prevention of Tuberculosis. Dr. Dixon has been delegated to solicit the cooperation of the governor through the various state departments in the work. Meetings will be held monthly at first, but will be held more frequently as the date of the International Congress approaches. Not only will the local boards of health in every county join in the work, but churches, charitable organizations of all kinds, labor unions and public schools and philanthropic organizations and individuals will be urged to cooperate. Additions are proposed to be made to the committee's membership until 1,000 societies and individuals shall represent the state in its deliberations.

CANADA.

Consumption of Liquors, Etc., in Canada.— The report of the inland revenue department at Ottawa for the first nine months of the official year, which ended June 30, 1907, shows that more whisky and tobacco were consumed in Canada than for the corresponding period in the previous year. The annual consumption per capita is as follows: Spirits, 0.947 gallons, as against 0.861; beer, 5.585 gallons, as against 5.255; wine, 0.092 gallons (no increase); tobacco, 2.953 pounds, as against 2.777 pounds.

Hospital News.—The sixteenth annual meeting of the Montreal Foundling Hospital was held during the week ended October 26. Dr. A. D. Blackader read the medical report. There passed through the hospital during the past year 203 children, of whom 123 were foundlings. Eleven were adopted into good homes, and one over age went to the Orphan Asylum. Sixty were returned in good health to their families.——A new nurses' home is to be built in connection with the Jubilee Royal Hospital of Victoria, B. C.——Owing to hospital abuse in the Vancouver General Hospital, the board of governors has appointed a special collecting officer, whose duty will be to collect accounts against all patients able to pay for their hospital maintenance. The hospital is crowded and a new wing will be added in the spring.

Personal—Dr. F. Montizambert, director general of public health, has been ordered to Vancouver and Victoria, B. C., his mission being to take and institute all necessary precautions to avoid the introduction of the bubonic plague into Canada. ——Dr. Joseph Gibbs, Victoria, B. C., is returning home from Vienna, where he was taking graduate work in genitourinary surgery.——Dr. F. Monod, Montreal, has gone to Paris.——Dr. Pennyfather, formerly of Winnipeg, has returned to practice in that city from Holland, Man.——Mr. F. W. Thomson, president of the Ogilvie Milling Company, Montreal, has donated $500 to the British Columbia Consumption Sanatorium.——Dr. William Oldright, professor of hygiene in the University of Toronto, has returned home after spending the summer in England and on the continent.——Dr. John W. Considine, St. Catherines, Ont., has just celebrated his ninetieth birthday and is still engaged in practice.——Dr. D. G. Revell has been appointed provincial bacteriologist in the department of agriculture at Edmonton, Alberta.——Dr. G. C. Richardson, Hazeldean, Ont., has been appointed sheriff of Carleton County, Ont.

FOREIGN.

Antituberculosis Dispensary at Bahia, Brazil.—The cornerstone of a dispensary for the aid of the tuberculous was recently laid at Bahia, with appropriate ceremonies, the governor of the state presiding. It is the work of the Bahia Antituberculosis League, which was organized last spring by the professors of the medical faculty and others under the leadership of Alfredo Britto, dean of the faculty.

Physicians' Automobile Club at Vienna.—A number of Vienna physicians have organized to facilitate the renting of automobiles by physicians and to reduce garage and chauffeur expenses, so that the total expense will be no more than physicians have been in the habit of bearing for other rented conveyances. Hochsinger is president and P. Liebesny is secretary. The address of the latter is Mariahilferstrasse No. 169, Vienna, XV.

Italian Association for the History of Medicine.—A number of physicians and professors gathered at Perugia last month for the purpose of organizing a society for study of the history of medicine. A number of interesting communications were presented after the business session, among them one dealing with the medical school at Perugia during the thirteenth and fourteenth centuries, and another with the history of syphilis in Italy after the passage of the troops of Charles VIII. Resolutions were adopted urging universities to make provision for the study of the history of medicine.

The Advertising and Sale of Medicines not "The Practice of Medicine."—A recent decision of the court of appeals at Berlin states that the advertising, lauding and delivering of medicines is not the practice of medicine, but is merely a mercantile transaction. A fine had been imposed on a certain man for his circular advertising a remedy for hog erysipelas, but the court of appeals reversed this sentence on the above grounds. The *Allg. med. Ct.-Ztg.* comments that this case shows the utter inadequacy of the present police and other regulations against quackery and nostrums in Germany.

Cancer Research in Japan.—We learn from the *Med. Klinik* that an institute for cancer research is to be organized in Japan and that the first issue of a journal devoted exclusively to cancer research has already appeared. Yamagiwa, professor of pathologic anatomy, is the editor, and it is proposed to review the field of cancer research in German, French and English-speaking countries. The editor comments on the participation of Japan in cancer research, adding the comforting assurance that the new journal, *Gann*, will "promulgate the news without delay in case the actual cause of cancer should happen to be discovered first in Japan."

Traveling Prize for Buenos Aires Medical Graduates.—The medical faculty at Buenos Aires announces in the *Semana Medica* for October 3, that a prize will be given to two medical students who graduate with high honors, the sum allowed being sufficient to allow a year of travel and study in the universities or institutes of Europe or North America. The prize consists of monthly payments of $150 in gold for a year, allowing, besides, time and expenses for the going and returning voyage. The recipients of the prize are allowed to select the university or institute they prefer, but they will be expected to present a report at the end of the year on the present status of the branch of science in which they have specialized, with a special report each of his own work. The faculty has also offered the same conditions to graduates within two years of the medical school who may wish to take a special graduate course in some other country. Those wishing to take advantage of this offer must give proof of a knowledge of the language of the country to which they wish to go, and present some publications written by them on the branch of science in which they wish to specialize, with an unpublished memoir.

International Antiquackery Committee.—This committee held a meeting recently at Berlin, with Siefart, president of the German Antiquackery Association, in the chair. A resolution was adopted urging every country to organize an antiquackery association, to be represented in the international union. Twice a year each national society is to report to headquarters; the reports are to be published in the German *Gesundheitslehrer*—Guide to Health—published by Dr. Kantor of Warnsdorf, Bohemia. The exhibition of the German Antiquackery Society was then inspected. This contains historical and modern examples of the methods and advertisements of irregulars in various countries, with statistics in regard to their location, prevalence, etc. One of the exhibits shows criminal records for about 30 per cent. of the quacks in Germany. Another exhibit shows the various regulations and laws enacted against them in various countries, with the warnings against them and against fake "patent medicines" issued in certain German cities, and the articles and pamphlets written by physicians and others to show the evils of quack practices. C. Alexander of Breslau and G. Meyer of Berlin collected most of the material. Dr. Kantor, mentioned above, was recently sued for damages for slander on account of his remarks in a number of the *Gesundheitslehrer* in regard to the claims made by L. Bauer, a manufacturing chemist, in regard to his "antidiabeticum." When the suit was brought into court, Kantor was able to present such an array of evidence against Bauer's practices, and the suit was taking such an unfavorable turn, that Bauer abruptly withdrew his complaint the second day and assumed the costs of the suit.

LONDON LETTER.

(*From Our Regular Correspondent.*)

LONDON, Oct. 29, 1907.

Conference on Sweated Industries in Glasgow.

What is known as sweated labor, or labor which is performed at a starvation wage, is attracting widespread attention in Great Britain at present. A conference on the matter was recently held in Glasgow, the second largest industrial town of Great Britain. The Scottish Council for Women's Trades for many years has been investigating the facts connected with women home workers. The results of these investigations have been recorded in a series of reports, a perusal of which is sufficient to startle and appall. In Glasgow there are known to be 1,320 female home workers, employed in 34 different trades or occupations; 977 of these were specially visited, and full information as to their work was obtained from 528. Information was declined in many instances because the loss of employment was feared. The worst paid industry in Glasgow was that of "finishing men's trouserings and suitings," the average rate of wage paid to average-ability workers in this industry being less than 4 cents per hour. It goes without saying that sweated labor is injurious to health in every way.

Preventive Medicine.

Sir James Crichton Browne, in the course of a speech made recently said that each step forward in civilization involves new disease risks and diagnostic insight, and that chemical skill and therapeutic ability will be in demand for a long time to come. He said that he has no anxiety regarding the future of the medical profession when he looks at the columns in the daily newspapers devoted to the eulogy of quacks and proprietary medicines. There is a prolific source of disease that medical men can never touch. The progress of preventive medicine during the past quarter of a century has been remarkable, and still greater achievements, he declared, are in store if the local authorities and parliament would only give it fair play.

Sleeping Sickness.

The report of the first International Conference on Sleeping Sickness, held in London in June last, at which representatives of the governments of Germany, the Congo Free State, France, Great Britain, Italy, Portugal and the Soudan attended, has just been issued as a parliamentary paper. The following measures are recommended: Physicians who practice in Africa must be able to diagnose sleeping sickness in its earliest stages. It is desirable that missionaries starting for Central Africa should be instructed in schools of colonial medicine in all that concerns the struggle against sleeping sickness. Sanitary police measures are necessary to prevent natives suffering from sleeping sickness from entering uninfected districts. Treatment by atoxyl has the great advantage of eliminating the trypanosomes from the major circulation and thus removing the dangers of contagion. This treatment should, therefore, be applied as soon as possible to all infected persons. Europeans should make their camps, so far as possible, in places where there is no glossina and at a distance from native settlements attacked by the disease or suspected of being so.

A Medical Missionary Exhibition.

A novel form of exhibition has been held in Cardiff, termed "A Medical Missionary Exhibition." It is on an elaborate scale. In a special court are representations of hospital wards in India and China, exact reproductions of a medical mission dispensary and a native doctor's shop. This last is a collection of native medicines and instruments, "gods of medicine," etc. The object is to show by contrast the great need of medical work abroad. Lastly, there is an opium den, fitted up to afford a realistic idea of the curse of China. Among the exhibits in the Indian court is a Buddhist book written by hand on palm leaf and ascribed to many gods and goddesses of Indian mythology, and a piece of wood from the car of Juggernaut. In the China court is shown a "lock of life," which, made from the hair of the two parents and woven into a skein, is fastened around a Chinese baby's body in order to protect it from evil spirits.

Another Attempt to Punish a Health Officer for Doing His Duty.

A case analogous to that of the health officer of Southend, described in a previous letter, has occurred at Cheltenham, a well-known inland watering place. The town has been served for many years by an energetic health officer, Dr. Garrett, who has fearlessly done his duty. Among other things, he endeavored to induce the local butchers to slaughter their cattle where they could be properly examined, rather than in the secrecy and often dirty conditions of private slaughter houses. Though not the slightest complaint can be made against him for neglect of duty, an attempt is being made to reduce his salary by $500 a year. Prosecutions for possessing insanitary property, adulterating sugar, selling unwholesome food and similar evil deeds appear to be the basis of the attack.

The London Provident Dispensaries and the Hospitals.

The overcrowding of the outpatient departments of the London hospitals has long been a crying evil. Not only does this overcrowding put a great strain on the resources of the hospitals and cause delay in treatment, but many persons who are well able to pay seek free advice for comparatively trifling ailments. The only means of combating the evil appears to be cooperation between the hospitals and provident dispen-

saries. In the provident dispensaries a small payment of about two cents a week is made as an insurance against illness and entitles the payer to advice and medicine when he becomes ill. Several provident dispensaries are scattered over the metropolis, but they are entirely independent and in no way coordinated with one another. "The London Provident Dispensaries' Council" has been formed as the outcome of a conference of the provident dispensaries of London. Its objects are to circulate information on the provident medical movement among the medical profession and the public and to promote the establishment over the whole area of London of well-equipped and well-regulated provident dispensaries. It will also endeavor to promote cooperation between provident dispensaries and hospitals, which is essential for the relief of the outpatient departments of the latter.

Proof That Rat Fleas Do Bite Men—Method of Transmission of Plague.

The advisory committee appointed by the secretary of state for India, the British Royal Society, and the Lister Institute to make investigations into plague in India, recently published a series of reports. By numerous experiments the observations of Simond in 1898, and of Gauthier and Raybaud in 1902 and 1903, that plague may be transmitted from rat to rat by the agency of rat fleas have been amply confirmed. The direct experiment to show that plague can be conveyed in the same way from rat to man can never be made, and the inferential transference of the results of the experiments on rats to the spread of human plague has been not a little opposed on the ground that rat fleas do not bite men. On this point the committee concludes thus: "We have shown that in the laboratory the rat flea, *Pulex cheopis*, will readily bite man. When very numerous it will bite man even in the presence of its natural host; we can conclude, therefore, that the rat flea, *Pulex cheopis*, in certain circumstances, is attracted by man, and will readily bite and feed on him."

Royal College of Surgeons of England.

The calendar of the Royal College of Surgeons has just been published by the council. It shows that there are 1,387 fellows on the roll of the college. There are 17,544 members and 398 licentiates in midwifery. The licentiates in dental surgery are stated to number 2,111, holders of the diploma of public health granted by the Royal Colleges of Physicians and Surgeons number 601. The income from all sources amounted to $121,500 and the expenses for the year to $113,000.

Distribution of Sleeping Sickness.

The British Colonial office report on the hygiene and demography of British Central Africa by Dr. Hearsey provides instructive reading in regard to the geographical distribution of sleeping sickness. The area covered is a large one, and it has been clearly shown that where *Glossina palpalis* abounds there sleeping sickness is prevalent. It has been stated that unless effective steps are taken to free Uganda from those species of tsetse flies which convey the disease to man, Uganda will be absolutely depopulated and rendered useless.

Overcrowding in Ireland.

Mr. Redmond, speaking at Sligo a few weeks ago, referred to the terrible condition of the houses in many Irish rural districts, as well as in the towns, and which is responsible to a great extent for the spread of tuberculosis. Mr. Redmond said that at present there are in Ireland 79,149 tenements consisting of one room only, and in that one room a family lives; of two-room tenements there are 242,710. In Dublin alone it is said that 36.7 per cent. of all the families of that city are living in one room.

Filthy Milk.

As often pointed out in THE JOURNAL the problem of obtaining clean milk is an urgent and unsolved one. But it is rare to find milk in such a filthy condition as in the following case: A sanitary inspector took a sample of milk from the can of a street hawker and found it so bad that he seized the whole contents. On examination by the health officer a large number of smuts were found floating on the surface of the milk and an accumulation of filth at the bottom with a most offensive odor. Microscopic examination showed among the foreign matter seeds, bits of straw and of tomato skin, grit, hairs, some of which were human and some not, and particles of human skin, the kind of refuse which might be due to exposure of the milk in a dirty stable or street. The defendant suggested the foggy state of the atmosphere on the morning of the seizure as an explanation. The magistrate inflicted the extreme penalty of the law—six months' imprisonment with hard labor.

Care of School Children.

The project of providing meals for insufficiently fed children in the government schools has been much discussed recently. It is contended, by those who favor what is called social reform, that it is absurd for the state to insist on the attendance at school of a child who, from insufficient feeding, can not profit by the instruction. On the other hand, many are opposed to this socialistic attempt to remove parental responsibility. At present, voluntary agencies do a great deal in providing meals for insufficiently fed children. The London County Council, which controls all board schools of the metropolis, has the power to provide meals for these children, but it has resolved not to avail itself of this power, and thus throw the cost of feeding these children on the public, so long as voluntary assistance is enough. An investigation by the Charity Organization Society has shown that the number of children actually suffering from insufficient feeding is grossly exaggerated and that the evils which exist are due mainly to want of parental care in preparing food and washing and clothing the children.

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, Oct. 25, 1907.

The Congress on Urology.

In the first week in October the new German Urologic Society, founded at Stuttgart last year, held its first congress in Vienna. The meeting lasted three days and the reception given the members was a very hearty one, both from the municipal authorities and from the ministry of education. There were about ninety papers read, dealing with all phases of urology, and especially with catheterization of the kidney pelvis, and disturbances of the uropoietic system. About three hundred members were present from Austria and Germany.

Better Weather: Better Vital Statistics.

The unusually warm and bright September following an equally dry and sunny August has caused the morbidity and mortality index for Vienna and Central Austria to sink much below the average figure. Diseases of the respiratory organs, usually very prevalent at this time of the year, are relatively scarce. Three times within the past ten weeks it has happened that in the Vienna General Hospital no patient died within twenty-four hours. Such an occurrence is marked by hanging a white flag at the entrance to the main building, and usually occurs only once every few years. The only increase in the morbidity was encountered in diseases of the alimentary canal in infants; this is possibly due to the deficient quality of cow's milk owing to the lack of fresh pasture.

Recommendations of the Union Medical Councils.

At the twelfth meeting of the Union of Medical Councils the following recommendations were forwarded to the government: 1. Medical men present in their professional capacity at a duel shall be exempt from punishment. 2. Forfeiture of a diploma or academic degrees shall be made only for crime. 3. Any one practicing medicine without legal qualifications shall be imprisoned whether or not such services were performed for pay. Emergency treatment is exempted. Injuries caused by illegal practice shall be cause for damages. 4. Compulsory vaccination shall be made lawful throughout the empire of Austria. 5. There shall be strict supervision of trussmakers, etc., so as to ensure that medical work is done by medical men.

The Medical Students of Austria.

The report of the ministry of education gives a few figures dealing with the number of students. There are 21,504 students entered at the seven universities of Austria, of which 3,100, or about 15 per cent., are medical students; of the latter 132 are females. The majority of the medical students, 1,440, have matriculated at Vienna, while in Prague and Cracow there are about 450 each. There is a constant increase in the number of students in all branches of the universities, more marked in the Slavonic countries than in the German part of the empire. The number of practitioners is also increasing, although only very gradually.

A Medical Club in Parliament.

There has recently been founded a medical club in parliament. About thirty members have joined the club, which has been formed with a view to protecting the interests of the profession in all legislative measures.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Common Sense Versus Voodooism in Acetanilid Combinations.

ACETANILIDUM (U. S. P.), acetanilid, is a coal-tar product having antipyretic and analgesic powers. It is a white, crystalline substance, insoluble in water, without odor, and with a slightly burning taste. It is best administered in tablet, capsule or powder, and the ordinary adult dose is twenty centigrams (.20 grams), three grains.

It is a circulatory depressant, and in large doses causes cyanosis, marked depression of the respiratory center, and heart failure. It reduces temperature by lessening the production of heat, perhaps by acting on the nervous heat centers, but also by diminishing muscular activity and irritability, and by dilating the peripheral blood vessels and producing perspiration, thus increasing the loss of heat. It relieves pain both by acting on the circulation and relieving congestion, and also by dulling the sensibility of the nerves. It is more depressant to the heart than is antipyrin and produces less perspiration than does antipyrin, but is more of an analgesic. Unlike morphin, to cause a lessening of pain it must produce a certain amount of prostration.

ACETPHENETIDINUM (U. S. P.), phenacetin, will cause less depression than either acetanilid or antipyrin, but is not so active as these drugs either as an antipyretic or as an analgesic.

Chronic acetanilid poisoning is of very frequent occurrence, but is rarely recognized because its development is so insidious. Its chronic manifestations are anemia, prostration and weakened cardiac muscle, so that a person who is addicted to the use of an acetanilid preparation for any recurrent or chronic pain soon becomes deficient in power to successfully fight any acute disease that may attack him or to withstand the shock of any operation that may be necessary.

CAFFEINA (U. S. P.), caffein or thein, is an alkaloid of coffee, tea and several other plants. The official caffein may be prepared from dried tea leaves or from dried coffee beans, but generally, probably, from the former.

CAFFEINA CITRATA (U. S. P.), citrated caffein, is the preparation most generally used. This occurs as a white powder, odorless, with a bitter taste, and soluble in twenty-five parts of water. The ordinary adult dose is ten centigrams (.10 gram), or about two grains, which may be administered in powder, capsule or solution.

Caffein is a stimulant to the brain, a stimulant to the circulation, and increases the kidney secretion both by its action on the circulation and by a local action on the epithelial kidney cells. Very large doses may cause cerebral confusion, tremors, and even convulsions, coldness of the body, and perhaps, rarely, death. Tolerance to its stimulation is easily acquired, but chronic poisoning can occur as evidenced by irregular cardiac action, nervous irritability, trembling and insomnia. Ordinary doses raise the blood pressure by acting principally on the vasomotor center, though it also somewhat increases the strength of the cardiac contractions. Its principal activity is as a cerebral stimulant, and it is, perhaps, the most active cerebral stimulant that we possess. As a cardiac stimulant or tonic it is of considerable value in acute heart weakness, but is not of much value in chronic cardiac debility. While it generally causes diuresis, it is not of marked value in dropsies. While not very stimulating to the kidneys, it is best not used in renal inflammations. If caffein is administered continuously, it had best not be given at night, as it tends to cause wakefulness.

SODII BICARBONAS (U. S. P.), sodium bicarbonate, baking soda, is a white powder, without odor, of a mildly alkaline taste, and is soluble in twelve parts of water. The adult dose is from one-half to one gram (.50 to 1. gram), seven to fifteen grains, and is most frequently ordered as a powder. This drug is a non-poisonous alkali. When taken in concentrated solution or as an undissolved powder it is slightly irritant to the stomach and may cause a little burning sensation, or even nausea and vomiting. Large amounts may cause increased activity of the bowels, and a slightly increased secretion of urine. It rarely will render the urine alkaline. Its principal use is as an antacid, either after meals in hyperacidity of the stomach, or before meals to cause the stomach contents to remain alkaline and neutral for a longer period when there is hypersecretion of hydrochloric acid. It can not cause poisoning, but continued use of large amounts may cause indigestion, a drying of the skin, and sometimes eruptions. Nitrogenous metabolism and waste may be increased by continuous doses of sodium bicarbonate as by most alkalies that are readily absorbed. It has no internal medicinal effect other than those mentioned.

AMMONII CARBONAS (U. S. P.), ammonium carbonate, occurs in white masses, having a strong ammonia odor and a sharp saline taste. While it is very soluble in water (four parts) it is so irritating to mucous membranes that it should always be well diluted, or if given in any amount, protected by some thick syrup or mucilage in order that the throat and stomach may not be irritated. The adult dose is twenty-five centigrams (.25 gram), or four grains.

In strong solutions it can cause nausea and vomiting by its irritation, and in concentrated solutions can cause corrosion. It has the effect on the system of ammonia and is, therefore, a cardiac and respiratory stimulant. It has some expectorant action, but not so much as ammonium chlorid. While experimentally it is a stimulant to the central nervous system, it probably has no such effect when given medicinally. Such stimulation as occurs is due to an improved circulation. That it ever prevents the formation of antemortem clots in the heart is very doubtful.

As a cardiac stimulant in syncope it is often administered by inhalation as the ordinary smelling salts. As a cardiac stimulant administered by the mouth it is not so efficient as aromatic spirits of ammonia. As above stated, as an expectorant in bronchitis to render the mucous secretion more liquid or more easily expectorated, it is not so efficient and much more likely to produce nausea than is ammonium chlorid. It is, however, frequently used in cough mixtures, and adds cardiac stimulation and respiratory stimulation to its expectorant properties when such action is needed.

ACIDUM CITRICUM (U. S. P.), citric acid, occurs as colorless crystals, odorless, having a pure acid taste, and is very soluble in alcohol and water. It is a vegetable acid obtained from limes and lemons. While the adult dose is about half a gram (.50 gram), or seven and one-half grains, it is rarely used for any physiologic or medicinal action. It is often used, however, as a corrigent or to flavor mixtures.

It is not a poison, and has no marked physiologic action. In large quantities it may act as a saline cathartic. It is readily oxidized in the system, and will not render the blood less alkaline nor the urine more acid. If the action of a vege-

table acid such as citric is desired the fresh juice of lemons had best be administered.

SODII SALICYLAS (U. S. P.), sodium salicylate, occurs in white crystals or as an amorphous powder. It is odorless, and has a sweet, salty taste. It is very soluble in water, and soluble in alcohol. It is slightly irritant, and is best administered in solution, although in small amount it may be administered in capsule, directly after a meal. The adult dose is from half a gram to a gram (.50 to 1. gram), or from seven and one-half to fifteen grains.

Sodium salicylate is one of the best preparations for obtaining the action of salicylic acid medicinally. It has an antiseptic action in the stomach and possibly the upper part of the intestine. In large doses and when not properly diluted it acts as an irritant to the stomach, causing vomiting. After absorption it dilates the blood vessels, especially of the surface of the body, causes perspiration, and hence can reduce temperature. This action is especially marked in inflammatory rheumatism. It dilates the blood vessels of the head, causing flushing of the face, ringing in the ears, sometimes blurring of the eyes, dizziness, and perhaps headache. This is known as salicylism, and is not dissimilar to the condition caused by the quinin salts, called cinchonism. A pure preparation of sodium salicylate will rarely cause any cardiac disturbance, but large doses of an impure preparation may cause some cardiac weakness.

Poisonous doses are liable to cause delirium and convulsions, and as an after effect, albuminuria, and rarely hemoglobinuria and nephritis. Even small doses can sometimes cause, from reflex irritation in the gastrointestinal canal, eruptions similar to urticaria, or erythematous in character. Unless the dose taken was poisonous, there is rarely any perceptible action on the nervous system, although the pain due to rheumatism is often ameliorated by sodium salicylate. If salicylic acid or its salts are too long administered, even in ordinary doses, the circulation is weakened and muscular debility develops. Salicylic acid (including its salts) is one of the best stimulants to the liver cells that we have, the bile being increased under its action. Nitrogenous metabolism is always increased under the action of salicylic acid and its salts.

Sodium salicylate is used in acute inflammatory arthritis, and as an antirheumatic in various myalgias and joint inflammations.

The physiologic action and the therapeutic value of the above drugs have been stated here to show how absolutely unnecessary it is for any physician to prescribe such nostrums as ammonal, antikamnia, Koehler's headache powders, orangeine, phenalgin or salacetin, all of which have been shown to be combinations of two or more of the above drugs, in THE JOURNAL A. M. A., June 3, 1905, page 1790.

If any physician decides that acetanilid or acetphenetidinum (phenacetin) is the drug which he wishes to use to relieve high temperature or pain, and if he believes that sodium bicarbonate will aid in the activity of the acetanilid, and if he believes that a circulatory stimulant such as caffein will render the acetanilid dose the safer, or that caffein will aid in stopping a headache, or if he believes that ammonium carbonate will act as a cardiac stimulant to overcome the depressant effects of the acetanilid, he can certainly combine these drugs in any way he sees fit to meet the indications of the individual case. If he wishes to cause a slight effervescence he may combine in a dry powder a little citric acid with a little bicarbonate of sodium, and this when put in solution will occasion a slight effervescence.

With the above single doses for an adult in mind, it only remains to decide how many of these acetanilid powders or capsules he will allow the patient to have. It must be remembered that a dose of acetanilid that is to be several times repeated during any one day must be considerably smaller than a dose that is to be given but once. Also, there is no reason why each physician should not have made for his own use a combination of acetanilid with such drugs as he deems best for use in his own office, so that he may give as many doses of acetanilid to his patient as he thinks best. There is then no danger of the patient repeating the acetanilid prescription and finally doing himself injury by the frequent use of the drug.

The Pharmacopeia contains the PULVIS ACETANILIDI COMPOSITUS every 100 parts of which contains 70 parts of acetanilid, 10 parts of caffein and 20 parts of bicarbonate of soda. A single adult dose of this preparation is thirty centigrams (.30 gram), or five grains.

Any combination of acetanilid and the above drugs may have added to it the sulphate of codein (U. S. P.), or phenylis salicylas (salol) (U. S. P.), to meet any requirements that any corresponding nostrum can meet. Also acetphenetidinum (phenacetin) may be substituted for the acetanilid as desired.

Frostbite.

Ritter (*Muenchener med. Wochenschrift*, May 7, 1907) believes that the best treatment for chronic frostbite is by producing arterial dilatation and hyperemia of the part by means of hot air. The hot air should be applied from one-half hour to one hour daily, and high temperature should be used, care being taken not to cause fainting.

In acute frostbite he causes passive congestion by an elastic bandage above the affected part. This he finds gives rapid relief from pain and itching, and when ulcers have occurred and gangrene developed causes a rapid healing of the former and demarcation in the latter. He applies the bandage for from six to twelve hours daily, taking care that the part below should asume a bright red color and show an increased temperature. In anemic individuals or persons with low vitality he first applies hot air to the part and later the bandage. Ritter believes the judicious use of hyperemia is the best treatment for chronic and acute frostbite.

Correspondence

Pharmacology and the Application of Science to Therapeutics Abroad.

[We have received from Dr. Reid Hunt, of Washington, a member of the Council on Pharmacy and Chemistry, a personal letter containing some notes on his observations during a recent European trip concerning the progress of pharmacology abroad. We publish, with his permission, the following extracts.—ED.].

I was especially impressed with what seems to be a tendency in Germany to devote less attention to the search for curative sera and more to that for new drugs of definite chemical composition. Thus at Ehrlich's laboratory at Frankfort, so famous for its researches on immunity, especial emphasis is now laid on work with such drugs. This laboratory has recently received an endowment of about $250,000, and Professor Ehrlich used the entire sum in founding the "Georg Speyer Haus," a laboratory devoted exclusively to the study of "chemical therapeutics," i. e., to the cure of disease by drugs of definite chemical composition. Ehrlich stated that the foundation of this new institute was the realization of hopes he had entertained from his youth. At present the investigations relate especially to experimental trypanosomiasis, on which Ehrlich has already published a number of communications. Many others in Europe are also working on the same subject from very much the same standpoint, and no one seems to doubt that an efficient remedy for the terrible diseases caused by trypanosomes will soon be discovered.

Ehrlich has for some time advocated a more thorough study of drugs, and especially a study from the biologic side; he says that the medical profession has surrendered too much to the

chemists in this respect. The strength of Ehrlich's convictions on this subject is shown by his recent communication, with Bechhold, on "The Relation Between Chemical Constitution and Bactericidal Action, a Study of Internal Asepsis;" in this paper the ground is taken that there is no reason why chemical compounds with as specific an effect on bacterial infections as quinin has on malaria should not be found.

The director of one of the greatest of the German bacteriologic institutes expressed a similar view. He said: "We bacteriologists can hope to improve diagnosis by means of immunity reactions, but the future of medicine is in pharmacology," and expressed the opinion that it would soon be possible, for example, to disinfect, with drugs, the gall bladder of typhoid bacillus carriers as effectually as the urinary bladder may now be disinfected by hexamethylenamin in certain forms of cystitis; in this way not only would the danger of the formation of gall stones be lessened, but the chances of spreading typhoid be diminished.

It thus appears that the skepticism about the discovery of new drugs which will be of value in the cure of disease is passing away, at least in Germany. For two decades the best energies of the profession have been devoted to the study of antitoxins, bactericidal sera, etc., as these seemed to offer the most promising field. It has become almost an axiom that it is "hopeless to try to cure, with drugs, self-limited diseases." Ehrlich, however, if we may judge from his recent publications, especially those with Bechhold, does not take this view.

The question as to where such investigations shall be undertaken is a matter of serious concern to those in Germany who take this optimistic view of the future of pharmacology. It is recognized that the most desirable place is in the various laboratories connected with the universities or in institutes especially endowed from which the results could be given freely to the medical profession. The commercial value of discoveries in this field is, however, so great that firms with large capital have been attracted to it. Some of these firms are willing to spend more money on such work than the endowed institutes can afford. It is also recognized that many drugs, but slightly, if at all, superior to those already in use, are often temporarily a source of large income mainly through effective advertising. Cordial relations seem to exist between the large manufacturing houses and the medical profession in Germany, but some members of the latter complain bitterly of the "trust methods" employed by a few of the former to check competition. Specific cases were mentioned in which investigators had spent years opening up new lines of research and as soon as the investigations appeared to be successful certain manufacturers took up the work and by patenting almost all conceivable methods of preparing analogous compounds they effectively checked further disinterested research. One investigator who for many years has been giving his results freely to the world expressed the opinion that the only way in which these methods can be met is for the laboratories devoted to research to patent their discoveries. He also thought that this would be the only means by which such laboratories can obtain the large amounts of money necessary to carry on these expensive investigations, but added that he greatly regretted the necessity for such a step and hoped that in the United States, "where laboratories for medical research are so richly endowed," a different method could be pursued. (As a matter of fact, most of the German laboratories have incomes almost unknown in the United States.) The amount of work involved in such researches is illustrated by the fact that Ehrlich, in his studies on trypanosomiasis, had, at the time I visited the Frankfurt Institute, already experimented with 418 compounds; a large number of these had not hitherto been made by chemists.

In the meantime the immediate necessity of a greater degree of control over the products of the manufacturers is recognized and much interest was manifested in the work of the American Medical Association along this line. It was found that certain supposed "synthetics" which have recently been occupying the attention of the Council on Pharmacy and Chemistry were also being investigated in Germany; some of the German testimonials with which the manufacturers or their agents have endeavored to impress the Council were a source of considerable amusement to the German investigators.

Those in Europe who had followed the history of atoxyl were much interested in learning that Professor PUCKNER had discovered so early the incorrectness of the manufacturers' statements concerning its composition. The same discovery was made almost simultaneously in France by Fourneau, in Germany by Ehrlich, and in England by Moore and his coworkers. It is evident that the profession will not be satisfied to remain long in ignorance concerning the true composition of the drugs they are using.

The Pharmaceutical Institute of the University of Berlin is doing a large amount of work in examining not only "patent medicines," but new proprietary synthetics; in a number of cases inconsistencies between the laboratory findings and the published statements have been pointed out.

Kobert, the well-known pharmacologist, has recently advocated that the medical societies and the government take a more active part in this work. He says that the laboratory methods of chemistry and pharmacology are now so well developed that it would probably be possible to select from the vast number of new drugs a few that are especially promising and to point out that in the case of many others the advantages do not correspond to their greater cost and that others may be positively injurious. Kobert emphasized especially the need of pharmacologic tests for many drugs. Gottlieb, the pharmacologist, and A. Fränkel, the clinician, have for some time been calling attention to the need of physiologically standardized preparations of digitalis. Gottlieb states that there is as much need for the testing of the digitalis preparations in the drug stores as there is for testing the antitoxic sera. Fränkel suggests:

> The government, which has provided an institute for the scientific testing of antitoxic sera, should also provide laboratories in which the physician can have the digitalis preparations which he uses in his practice physiologically tested. In the case of the antitoxic serum the only dangers lie in contamination and under strength; a serum over strength can do no harm. On the other hand, digitalis preparations of such varying strength are allowed to be sold that, on the one hand, the lives of patients may be shortened by the use of inferior preparations of this classical symptomatic drug; on the other, they may be threatened by the administration of too strong preparations.

Much work relating to such problems as the above is being done at the Imperial Health Office in Berlin, where also much research on problems connected with public health and work in connection with the German Pharmacopeia is being carried on.

Editors of German medical journals have formed an association for the investigation of paid "write-ups." A list of those who prepare articles of this character has been prepared and it is the intention of the editors to protect their readers against them.

Greater interest seems to be taken by the universities in pharmacology. Thus Freiburg, one of the very few German universities which up to the present has not had a professional pharmacologist, has organized a department of pharmacology and is erecting a large pharmacologic laboratory.

One of the most experienced teachers of pharmacology in Germany recently wrote as follows:

> It has always seemed strange to me that the teachers of pharmacology in America, with a few exceptions, do not seek to obtain any special training in the subject. In the German universities but a very small number of "pharmacologists" without special pharmacologic training remain. . . . . The second generation of pharmacologists are coming to Europe from Japan. . . . . A practicing physician can not be at the same time a pharmacologist. Pharmacology is a specialty which requires the entire intellectual powers of a man.

I was in England, but a short time, but I found that renewed interest is being taken in pharmacology there. Professor Cushny (formerly at the University of Michigan, now at University College, London) is soon to have a new and much better laboratory.

Professor Dixon of King's College has done much to stimulate interest in the pharmacologic standardization of drugs. At least one large manufacturing house has recently established a well-equipped laboratory for experimental pharmacology and placed it under the direction of a well-trained pharmacologist. The recent publications in the United States on commercial suprarenal preparations, especially that of Crawford

of the Department of Agriculture on their standardization, was attracting considerable attention among pharmacologists. Much interest was expressed in the work of the Council on Pharmacy and Chemistry; an exceptionally well-informed pharmacologist expressed the opinion that the work of the Council is driving some of the American frauds to England, as they are advertising in the British journals. The British physicians are asking what these widely advertised American drugs are. Some of those mentioned have been exposed by the Council on Pharmacy and Chemistry and the discussion of them in the Propaganda for Reform in Proprietary Medicines was read with much interest. It is claimed that the leading English manufacturers who seek the patronage of the medical profession refuse to make secret proprietary preparations for exploitation to either the profession or the public.

Two interesting articles, dealing to a greater or less extent with pharmacologic problems, have recently appeared in English journals. One, an address by Sir Lauder Brunton, shows how greatly the resources of the physician have been increased within the memory of those still very active in the profession.

Speaking of the conditions which prevailed when he was a hospital interne forty years ago, Brunton says: "We had no antisepsis." "I have heard people speak of the folly of an antiseptic spray during operations, but I do not think such people could have had any idea of the condition of operating theaters when the antiseptic method was introduced." "The medicines at our disposal for the treatment of diseases were few in comparison with those we now have, especially in those such as are useful in the treatment of sleeplessness and the relief of pain. For example, when one of my fellow residents had typhus fever we had no remedies to combat the distressing sleeplessness except opium combined, as the fever was high, with tartar emetic, for cannabis and hyoscyamus had proved inefficient, and I well remember the anxiety with which we watched to see whether a 'new remedy' for sleeplessness, viz., bromid of potassium, would produce the desired effect. Now we have chloral, sulphonal, trional, veronal, paraldehyd and many others." Since the time of which Brunton wrote such drugs as the antiseptics, the antipyretics, cocain, chloral, theobromin, sulphonal, eserin, the therapeutic value of the suprarenal and thyroid, and many others have been discovered: the most pronounced therapeutic nihilist will not deny that many of these are immense gains.

Cushny, pointing out the value of experiments on animals, has recently traced the source of most of these new drugs.[1] The following sentences are significant. "No soporific has been introduced in the last forty years, except by means of animal experiments." "No local anesthetic has been discovered, except by animal experiment." He found the same to be true for the antipyretics, eserin, strophanthus, all of the vascular dilators, suprarenal extract, caffein and theobromin, hexamethylenamin ("urotropin"), heroin and many others. "Excluding the local antiseptics which are used not to act on the patient, but on his parasites, he found that in the last forty years the only drug of even mediocre importance introduced by other methods was pilocarpin, which was introduced from its being used by the South Americans as a sudorific."

Treatment of Burns.

DENVER, Oct. 24, 1907.

To the Editor:—In reading the article in THE JOURNAL, September 7, page 863, on "Treatment of Burns," my attention was called to the number of picric acid formulas recommended. I was also reminded of my own personal experience with the use of this compound after a severe bromin burn and the excruciating pain it caused me to suffer. After several dressings of picric acid solution on gauze strips, with as many periods of torture thereby induced, I decided to use some agent which was both antiseptic and anesthetic. Carbolic acid was, of course, one of the first to be thought of, but discarded because of its tendency to produce gangrene. It was then that liquor cresolis comp. was tried with the most gratifying results. Since then, some twelve years past, I have had many occasions to employ it, and whether the burn was due to acids, steam, hot water or flame, the immediate relief of pain followed its application.

Having reported its use some years ago, I had expected that others would probably try it and that we would have further reports, but so far I have failed to see them recorded. While most burns are sterile by reason of the destructive agent, yet in burns involving any considerable surface, and produced through the wearing apparel, it is quite reasonable to expect some degree of infection. To clean the surface of these burns, and also render it both sterile and anesthetic, the use of but one solution has saved me much time and the patients considerable suffering. As the aqueous solution of liquor cresolis comp. is saponaceous, I have been using a ½ to 1 per cent. warm solution to bathe the injured part and wash away the débris; by the time this is accomplished the anesthesia is established. The blebs are then punctured and the serum expressed, after which gauze strips, spread with a 1 per cent. ointment of liquor cresolis comp. in petroleum, are applied over the entire burned surface, then covered with cotton and bandaged. This dressing may remain for four or five days, when it can be changed for any form which seems best to the attending surgeon. I have seldom found it necessary to use opiates after this form of dressing. Dr. Roosevelt has been using this compound recently after bromin burns. He finds that if used immediately and before there is much tissue destruction, it quickly neutralizes the chemical. He uses from a 25 per cent. to a full strength solution, finally washing this off when the pain is relieved and the skin but little damaged.

C. E. TENNANT.

1. Cushny: Brit. Med. Jour., 1907, i, 1195.

A New Disease?—Autointoxication?

HOMER, NEB., Oct. 30, 1907.

To the Editor:—It was with much interest I read the article of Dr. W. E. Clark of Frederick, S. D., in THE JOURNAL, Oct. 12, 1907, p. 1295, describing a number of cases of a new disease which he had seen. I saw my first case, similar to those he described, about the middle of July, and since that time I have seen a great many, but none for the past month.

The majority of cases were in young adults. Neither milk nor any excess in diet could be held accountable. The symptoms were the same as described by Dr. Clark. In one case, in which the patient was wildly delirious, there was a temperature of 104 F. In all the cases, when the headache subsided, the patients felt very comfortable, as it was the most painful feature of their illness. The bowels usually became loose, several free movements during the day. The appetite suddenly returned and, with the exception of a feeling of weakness, they felt well. In every case, the loss of flesh was marked, as none was sick a week and all lost from 10 to 15 pounds each. The headache lasted from 36 hours to 4 days. I finally concluded that it was an autointoxication through the intestinal canal, with a markedly torpid condition of the liver. I gave broken doses of calomel, followed by a saline cathartic, until there was a free action of the bowels; diuretics, such as potassium acetate; granular effervescent sodium phosphate as a hepatic stimulant; ice cap or cold water to the head; hot footbaths and confinement in a darkened room. Opiates had little effect, unless large doses of morphin were given. There were no fatalities.

NINA R. SMITH.

Therapeutics Not Necessarily Drug Giving.

FORT WAYNE, IND., Oct. 31, 1907.

To the Editor:—Addresses on pharmacology in THE JOURNAL complain of the ignorance and indifference of the medical profession to this branch of medical science. But are not the medical colleges and the American Medical Association responsible for these things? The colleges have chairs of "materia medica and therapeutics," and the American Medical Association has a Section on Pharmacology and Therapeutics. Why therapeutics? There are several therapies, such as surgery, besides pharmacotherapy. There is no reason why drugs and therapeutics should be so combined. It makes the public believe that treatment and drugging are the same thing. A judge has defined the practice of medicine as the prescribing of drugs;

and Eddyites and others take advantage of such misinterpretations. In colleges the physiologic effect of drugs should be thoroughly taught, because they can be shown and proved in the laboratory; and the student is then in a position to evolve his own therapeutics. More interest would be taken in materia medica if it were taught and discussed as an exact science. The absurdity of having mixed boards of examination for license would be removed if the examination in pharmacology related only to physiologic effect, for on this ground all schools are on a level. The Pharmacopeia makes an approach to being a text-book of pharmacology, but it is not complete in this respect. There will be little patronage for nostrums when a good work on the physiologic effects of drugs—unrelated to their medical applications—shall have been given to the profession; and when the American Medical Association shall cease to tag therapeutics to pharmacology. W. P. WHERY.

International Antialcohol Congress.

HARTFORD, CONN., Oct. 22, 1907.

To the Editor:—At the International Antialcoholic Congress, held recently at Stockholm, Sweden, a bureau was established having for its purpose the collection of statistics, papers and documents pertaining to the alcoholic problem from all points of view. This bureau is to be located at Zurich, Switzerland, with Professor Hercord as secretary. This is a similar organization to one formed in Boston last December, called the Scientific Temperance Federation. Both organizations have united, having the same purpose and object, and both are to work conjointly. Documents and papers of one will be transferred or utilized by the other. Both appeal to scientific and philanthropic persons everywhere to assist in the collection of books, papers, studies of every description pertaining to the alcoholic problem. These papers and documents are to be tabulated and arranged so that authors can utilize them in their studies of the subject. It will be possible for any one in this country to have an abstract or a copy of everything written on the alcoholic problem in Europe through these means. The European office will be able to present a similar copy or abstract of everything said and done on this topic in the English-speaking colonies. The American bureau is in charge of Miss C. F. Stoddard, secretary, 23 Trull Street, Boston. The aim of the American bureau is to have a very large membership of persons who will collect and assist in gathering every possible document that has a present or historic interest. Already many of the large libraries have offered to send duplicates of their works on these subjects to these bureaus and assist them in every way. Authors who will send copies of their writings can have the satisfaction of knowing that they will be put on file and tabulated for use in all the countries of the world. Any one wishing to become a member of this bureau should write to the secretary. The membership will include the privileges of the foreign bureau as well as the one at home. Every physician interested in the alcoholic problem can aid materially in building up these two great centers by sending every paper or statistic, incident or study that bears on this subject. As a director in both bureaus I shall be glad to give any information or suggestions possible. T. D. CROTHERS, M.D.

The Diagnosis of Gonorrhea in the Female.

ROCHESTER, N. Y., Oct. 16, 1907.

To the Editor:—The vagina normally contains myriads of organisms which are not incompatible with health. Since they are non-irritating, they have little power of penetrating the epithelium, hence they are for the most part to be found on the surface epithelial cells. When a poisonous organism, as the gonococcus, is implanted in the vagina, the profuse inflammatory discharge therefrom offers a first-rate medium for the growth of the numerous harmless secondary germs with the result that the gonococcus is often overshadowed and the microscopic diagnosis obscured. This is often of great importance, both clinically and medicolegally. The usual method of differentiation has been by contrast staining, but as a rule this is so unsatisfactory as to have but limited value. To obviate this difficulty I have employed the following procedure with most excellent results. Advantage is taken of the fact that the gonococci invade the deeper layers of the epithelium, the glands and the pus cells, all of which the secondary organisms do to a very limited extent. A mild antiseptic solution is applied to the vagina, which serves to destroy, or to eliminate, almost entirely the more exposed secondary organisms, leaving the protected intracellular gonococci in almost pure culture. The method I usually employ is as follows: On the first day the patient presents herself for examination a number of smears of the vaginal secretions are made and stained in the usual manner. If the secondary organisms are present in so great a number as to obscure the field or make doubtful the examination, a 1 to 3,000 bichlorid of mercury douche every four hours is ordered. In twenty-four hours more smears are made, and if the secondary germs still interfere the douches are continued, to be repeated on the third day. At this time, as a rule, the gonococci predominate to such an extent that there is no difficulty in identifying them. I have not seen this useful method in print, and, appreciating its value, have deemed it worthy of report.

JOHN R. WILLIAMS, M.D.

290 Monroe Avenue.

Need for a Bureau of Publicity.

WARREN, PA., Oct. 12, 1907.

To the Editor:—The average citizen is ignorant of the advances made by the medical profession, of the objects of organization, of the need for medical legislation, of the harm done by illiterate and unscrupulous pretenders and charlatans, and of the limitations of the medical art. Naturally, therefore, he becomes an easy prey for advertising quacks and nostrum vendors, and lends but little aid to the medical profession in its fight against ignorance and fraud. The average citizen does not read the medical journals, neither does the editor of the average newspaper.

If the medical profession wants to accomplish anything, it must have the cooperation of the public. To reach the public, therefore, would it not be well to edit suitable reading matter—under the heading of "Public Health"—and distribute it through the press associations (Associated Press) to the newspapers of the country. Such "plate matter" is purchased at so much a column, and each county society, if necessary, could subscribe for a weekly supply for one or two county newspapers. This is what the "patent-medicine" men's association is doing.

When issues of local nature arise, the state society could furnish items for the particular locality. Without some such publicity agency, there is no way of properly reaching the public, and all our efforts for public health laws or enforcement of existing laws must go for naught.

M. V. BALL.

Miscellany

New Sanitary Regulations for Texas.

The recent act of the legislature of Texas empowers the health officer to prepare rules and regulations for the improvement of the hygienic and sanitary conditions of public buildings, railroad coaches and sleeping cars in the state. In a copy of the regulations the rules are divided into ten chapters and three appendixes. Generally the points taken into consideration are a proper supply of light, air and wholesome drinking water. In public buildings sweeping during office hours is prohibited and the use, in sweeping, of sawdust wet with disinfectants is required. Scrubbing at specified intervals with some cleansing agent and a thorough disinfection also at stated intervals, are called for. Spitting on floors is prohibited and cuspidors must be provided, as must also sufficient urinal and water-closet accommodation. Elevator operators and care-takers who are suffering from tuberculosis or other infections or contagious disease must be excluded. These regulations apply to railway stations, office buildings, club houses, theaters and all public buildings not specifically provided for. With regard to hospitals, public sanatoria, hotels, boarding houses, restaurants, eating houses, lodging houses, etc., the

regulations require, in addition to the measures just described, the provision of gauze wire screening, not coarser than 14 mesh, for all doors, windows and other openings. This is required for all rooms where persons sleep or eat, or where food is displayed or handled. Such public buildings if within 500 feet of any public sanitary sewer must be connected therewith. Cisterns and water-containers must be screened, premises must be well drained and no water allowed to stagnate. In special relation to hospitals the regulations call for the disinfection, at least once monthly, of every bedroom occupied by patients not suffering from contagious or infectious diseases, and for those so occupied, including tuberculosis, disinfection at least once weekly as well as immediately on the removal of the patient. Monthly returns of all cases of contagious diseases in detail are required. In regard to hotels, restaurants, etc., the rules require weekly cleaning of ice-boxes, the proper care of walls and floors and of kitchens as well as the care of garbage. Similar regulations with regard to lighting and ventilating, cleaning and so forth, are laid down for jails, prisons, etc.

Slaughter houses must be sufficiently secluded so as to be not unduly dusty and so as not to create a nuisance. In such institutions drainage, screening, daily hose flushing and scrubbing, the whitewashing and disinfection of walls and the daily removal of offal, must be attended to. Meat markets and butcher shops also receive attention as regards screening, cleaning refrigerators, removal of offal, etc. Similar regulations apply to bakeries and manufactories of foodstuffs, with additional rules prohibiting the use of work rooms for any other purposes.

For schools, in addition to the regulations for other public buildings, the rules recommend the provision by the individual pupil of his own drinking cup and demand the exclusion of teachers or janitors suffering from tuberculosis or other contagious or infectious disease. They further require: "All contagious or infectious diseases to be reported to the authorized city or county health officer, and all children from the house infected must be barred from school until the health officer permits their return. In case of variola, all children exposed must be vaccinated or barred from school 18 days, and when the whole school has been exposed the school must be closed and disinfected, and in case the majority of the pupils have been successfully vaccinated, they, and any other vaccinated, allowed to attend school; those refusing to be vaccinated to be held in detention at home for 18 days." With regard to churches similar regulations are made.

The rules for railway coaches and sleeping cars require the adequate provision of cuspidors, a thorough cleaning (the manner of which is detailed) of cars at the end of each trip and the disinfection of sleeping coaches at the end of each run. Dumping ice, to be used for water coolers, on floors, etc., where people may have trod or expectorated, is prohibited. Expectorating in the basins of sleeping cars when cleaning the teeth is forbidden and cuspidors must be provided for that purpose. Proper attention is to be paid to ventilation by railway employés, who must also enforce the anti-spitting regulations. "They shall also inquire concerning any case of sickness which they may notice and determine as best they can whether it is a contagious or infectious disease, and if found to be such, the health officer at the next stop may be appealed to for the purpose of caring for the disease as seems best." A log is to be kept on each sleeping car operated in Texas, in which are to be entered all details relating to disinfection and cleaning. There are also regulations for lumber camps, railroad construction camps, boarding camps, pleasure camps or resorts and open-air health resorts, which call for at least 300 cubic feet of air space for each occupant, and such openings as will permit of 3,000 feet of air each hour; provision of proper kitchens and cook houses, refuse buckets, latrines, etc. A regulation also relates to an epidemic of smallpox or other infectious disease and the obligation is laid for immediate notification of the state health officer in case of such outbreak. Cleaning and whitewashing of the rooms and walls, and the filling up of all sinks, cesspools, pits or other excavations when abandoning or breaking up or moving the camp are called for. The appendixes, three in number, detail respectively the methods of disinfection recommended, the standard formaldehyd disinfecting solution and the meanings of the words "infectious or contagious disease," whenever used in the regulations.

Cystitis and Pyelitis in Children.—L. Langstein urges in the *Therapeutische Monatshefte* for May, 1907, the importance of examination of the urine whenever a child has fever of obscure origin. Restlessness, pallor, loss of appetite and general depression are often the only signs of a bladder affection in an infant or older child. This comparatively latent cystitis may run into an acute and severe form, with colic pains. This should be suggested when an infant draws its legs up to its abdomen, screaming with pain. Such colics are not always referable to the gastrointestinal tract. Other symptoms are extreme pallor, rapid breathing and screaming when the child is made to sit up. More advanced cases simulate the clinical picture of severe suppurative intestinal catarrh as the children are so pale, their eyes so big, and they cry restlessly and hoarsely. Rigidity of the back of the neck has been noted in very severe cases, suggesting meningitis. Examination of the urine clears up the diagnosis; an acid reaction speaks for colon bacillus cystitis. The reaction is alkaline with the pus cocci. In case of diphtheria bacillus cystitis, specific treatment should be instituted. Involvement of the kidney can generally be determined from the urine, and by tenderness in the kidney region. Vomiting and diarrhœa, independent of the food, frequently occur as the kidney becomes involved; convulsions and coma are also liable, death following with increasing fever. Cystitis is one of the most frequent affections in infancy, and affects girls almost exclusively, he says. Pyelitis in older girls is rarely diagnosed, but it occurs with comparative frequency. Sometimes not a single symptom points to the kidney, and the pallor and debility are ascribed to some constitutional disease. Colic-like pains radiating from the kidney region and a rise in temperature at long intervals, suggesting malaria, with apparently good health in the interim, are important symptoms of pyelitis in older children. It may simulate tuberculosis or typhoid fever in its course. Constipation and "catching cold" seem to be the principal factors in its etiology. Cleanliness of the genitals is of great importance in prophylaxis, and attendants should be taught always to wash from the front backwards, never from the anus forward, to prevent washing germs from the anus into the urethra. He advises hexamethylenamin (10 c.c. in milk of a mixture of from 1 to 3 gm. hexamethylenamin in 100 gm. water, for an infant). Older children can take up to 1.5 gm. a day. He also advocates salol, giving an infant from 0.1 to 0.3 gm. four times a day, and older children 0.5 gm. four times a day. Alternation of these two drugs has proved most useful in his experience, with abundance of fluids to drink, and a light diet. Local treatment if the bladder is not of much use unless the process is restricted to the bladder which is the exception. If the cystitis and pyelitis are not treated, uremia, contracted kidney, etc., are liable to follow later.

Eat Acetanilid Tablets Like Candy.—The *Boston Medical and Surgical Journal* gives a striking illustration of the abuse of acetanilid and the misuse of the guaranty provision of the Food and Drugs Act: "In the food fair, now being held in Boston, is a booth arranged for the purpose of advertising a preparation known as 'Celero,' or 'a headache lozenge.' While the envelopes used for the distribution of the lozenges bear a statement that each lozenge contains two grains of acetanilid, the assertion is also made that the lozenge is a safe and convenient remedy for all forms of headache and neuralgia. Following this statement are the words, 'Guaranteed under the Pure Food and Drugs Act, June 30, 1906,' which are followed immediately, in a much larger sized and far more conspicuous type, by the words, 'EAT IT LIKE CANDY—NO WATER NEEDED.' Many of the lozenges are kept in bulk, on the counter, in a large, uncovered glass dish, such as is used by confectioners for candies, and in several instances, in the course of a few moments' observation, a small handful of the tablets was taken by the person in charge of the booth, and given to a person coming to the booth, with such remark as the following: 'The only harmless preparation on the market; nothing injurious about it whatever; will positively cure your headache.' In one

instance the saleswoman was observed to put a lozenge in the mouth of a young person, as if it were candy. In another instance a young girl came to the booth, saying, 'Girlie, my little girl has got a headache; give me some of them.' A small handful was put into an envelope and given to this girl. At another time a boy, who appeared to be about 16 years of age, was in charge of the booth, giving away the lozenges in the same free and indiscriminate manner. Large sized advertisements are posted on the booth, emphasizing the fact that these lozenges may be 'eaten like candy.' In a circular, which is sent out with the lozenges, directions are given to 'Eat the lozenge like candy, at any time, before and after meals, in any place or under any conditions.' The phrase 'Eaten like candy,' is repeated in a conspicuous and heavy type."

Want Red Cross Emblem Limited in Use.—The following resolutions were adopted by the executive committee of the American National Red Cross, Oct. 18, 1907:

WHEREAS, By international agreement in the Treaty of Geneva, 1864, and the revised Treaty of Geneva, 1906, "the emblem of the red cross on a white ground and the words 'red cross' or "Geneva cross'" were adopted to designate the personnel protected by this convention; and

WHEREAS, The treaty further provides (Article 23) that "the emblem of the red cross on a white ground and the words 'red cross' or 'Geneva cross' can only be used, whether in time of peace or war, to protect or designate sanitary formations and establishments, the personnel and material protected by this convention;" and

WHEREAS, The American National Red Cross comes under the regulations of this treaty according to Article 10, "volunteer aid societies, duly recognized and authorized by their respective governments," such recognition and authority having been conferred on the American National Red Cross in the charter granted by Congress Jan. 5, 1905, Section 2: "The corporation hereby created is designated as the organization which is authorized to act in matters of relief under said treaty;" and, furthermore,

WHEREAS, In the Revised Treaty of Geneva, 1906, Article 27, it is provided that "the signatory powers whose legislation should not now be adequate, engage to take or recommend to their legislatures such measures as may be necessary to prevent the use by private persons or by societies other than those on which this convention confers the right thereto of the emblem or name of the red cross or Geneva cross;" be it

Resolved, That the executive committee of the American National Red Cross requests that all hospitals, health departments and like institutions kindly desist from the use of the red cross created for the special purpose mentioned above, and suggests that for it should be substituted some other insignia, such as a green St. Andrew's cross on a white ground, to be named the "hospital cross," and used to designate all hospitals (save such as are under the medical departments of the Army and Navy and the authorized volunteer aid society of the government), all health departments and like institutions; and, further, be it

Resolved, That the executive committee of the American National Red Cross likewise requests that all individuals or business firms and corporations, who employ the Geneva red cross for business purposes, kindly desist from such use, gradually withdrawing its employment and substituting some other distinguishing mark.

Hay Box for Infants' and Invalids' Food.—The "hay box," as it is currently described, is simply a wooden box built as nearly air-tight as possible and about two feet cube in size. The lid should fit closely and the box must be lined with a good non-conductor of heat—asbestos fiber or paper. It should be packed tight with asbestos fiber, hay, straw, excelsior or torn paper, except for the space left in the center for the vessel it is to contain. Such boxes are also on the market ready-made. W. W. Vinnedge, M.D., in the *Central States Medical Monitor*, details some of the uses to which the hay box may be put in the sick room and in traveling with an infant. The receptacle holding the food, either hot or cold, is put in the hay box and the lid closed. If the box is rightly made it will be found that the temperature of the contents, whether high or low, will be maintained for many hours, without further attention. Dr. Vinnedge gives two experiences with the use of the hay box; in one it was brought into requisition in the sick room to obviate the necessity for going down three flights of stairs, during the night, to the refrigerator, for the patient's food or drink. In the other case it was used by his daughter in a trip with her infant from Indiana to New York; bottles of sterilized milk were placed in a tin bucket packed with ice and the whole put in the hay box. With this device the baby was spared any change in food or in its preparation, during the long ride, and the parents were relieved of much anxiety and inconvenience.

Allergie.—This new term has been coined by C. von Pirquet to express the altered condition in which the body finds itself after it has passed through an infection from some extraneous material, such as a virus or cells or their derivatives. This condition of allergie manifests itself to a renewal of the same infection in an entirely different manner from the reaction to the primary infection. The term "immunity" has been applied to this condition hitherto, but is incorrect, as there may be only partial immunity, or the organism may even have been rendered ultra-susceptible. The term "allergie" includes, therefore, the conceptions of immunity and anaphylaxis. He has reduced to a science this "allergetic reaction" in smallpox and in tuberculosis, taking as his standard the local reaction to inoculation of diluted vaccine or tuberculin. He estimates the reaction with compass and rule, measuring the height and breadth of the vaccine pustule, for instance, and computing them with the time intervals to form a curve showing the "allergetic response" with mathematical accuracy. In case of revaccination the reaction either occurs more rapidly than the first time and is abortive in character, or, more rarely, it may be unusually severe and destructive. His "enti-reaction" to tuberculin has been recently commented on in these columns. Its value is being endorsed by numerous investigators.

Action of Roengen Rays on Central Nervous System.—C. Colombo relates in the *Policlinico* for April, 1907, that a woman of 36 had been treated with massage and Roentgen exposures to hasten the postoperative healing of varicose ulcers. The exposures were followed by a series of hysteric convulsions with intense nervous agitation and complete insomnia. The connection between the hysteric attacks and the exposures was not recognized at first, but each time resumption of Roentgen treatment was followed by the hysteric convulsions at night until this treatment was definitely suspended, when the symptoms began to subside. Colombo is inclined to believe that in this case the exposure of the legs to the rays was the cause of the trouble, the stimulation from the rays having been transmitted to the spine and cortex by the intermediation of the sensory nerve terminals. The rays were only the occasional cause, but they induced, by reflex action, the nervous phenomena to which the patient was already predisposed by the constitutional weakness of her nerve centers.

Queries and Minor Notes

GRADUATE STUDY ABROAD.

ELEELE, KAUAI, H. I., Sept. 26, 1907.

To the Editor:—Kindly give me some information regarding European clinics. I am leaving for Europe about February, 1908, and wish to devote one year to the study of clinical and operative surgery and clinical and operative gynecology, with perhaps a few months devoted to bacteriology. At what center can I get the best advantages and at the same time live most economically? I have heard much of Vienna: How is it? What are the opportunities in the British Isles? C. M. J. O'NEILL, M.D.

ANSWER.—Two aspects of study in a foreign country should be kept in mind and should be given separate consideration in determining whether it is profitable to undertake: First, the general educational and cultural value of foreign travel and study; second, the practical value of the medical knowledge gained. The general educational value is great and should be given due weight in considering the advisability of undertaking a trip. The direct practical value of the course of study in a foreign country depends largely on the preparation of the physician to take advantage of it. For one who has had no graduate instruction or who does not know the language the opportunities of American clinics will be of more practical value, and can be utilized at less cost. Competent American gynecologists claim that postgraduate work in this branch can be obtained to greater advantage in the United States than in any other country. The same is probably true of graduate work in general surgery. The American physician who wants clinical instruction will naturally seek the large medical centers, for he will be able to spend his limited time there to the best advantage. For laboratory work some of the smaller university cities may be as good as, or better than, the metropolis, but for clinical work abroad the choice is practically confined to Vienna, Munich, Berlin, Paris or London. The preponderating influence of German scientific thought on American medicine will influence most physicians to a choice of a German school.

The two most important German centers are Vienna and Berlin. Of these, Vienna has until lately had the preference of most American students, principally on account of the excellence of the instruction. It presents one great advantage in that the instruction is all, or nearly all, given at one center, the *Allgemeines*

Krankenhaus. In Berlin, on the other hand, the lectures are given at hospitals and polyclinics so widely separated that it is sometimes impossible for the student to take advantage of two courses, the hour for one of which immediately succeeds that of the other. There is an impression that facilities for instruction in Berlin are improving so that now one can do as well if not better there than in Vienna. Medical courses at Berlin are divided into: 1. The regular university courses, which are intended for the undergraduate students and are given in two terms, a winter semester lasting from October 15 to March 15, and a summer semester, from April 15 to August 15. 2. Vacation courses given by the university instructors during March and October. 3. Monthly courses by private instructors which are given the year round. These are mostly polyclinic or dispensary courses and correspond closely to the instruction given in graduate schools in the United States. The Anglo-American Medical Association in Berlin gives the following information regarding the best time to go to Berlin: In gynecology and obstetrics the best facilities for graduate work are to be had during the vacation periods, some courses being given only at these times. In all other branches—both clinical and laboratory—good work may be had all the year round. The courses consist mostly of lectures and demonstrations. In the polyclinics more or less opportunity to examine patients personally is given. Not so much use is made of ward clinics as might be expected from the success attending such instruction in America. An association similar to the Anglo-American Medical Association at Berlin exists also in Vienna. In Vienna vacation courses are given in August and September. Some courses intended for undergraduates are available to graduate students and are given by the professors, who are eminent clinicians. Other courses given by assistants to small classes are obtainable during the scholastic year and are in great demand by graduate students. In Paris, medical instruction is carried on by the medical faculty of the university and the classes are open to French and foreign physicians. Apparently no separate provision is made for graduate instruction. In Great Britain and Ireland facilities for graduate study are to be found at London, Cambridge, Edinburgh, Glasgow and Dublin. The London Postgraduate Association is an organization which has entered into arrangements with the principal medical schools and hospitals in London so that it is able to issue a ticket which admits the holder to all the clinical instruction provided in these institutions. Full particulars regarding this association can be obtained from the secretary, at Examination Hall, Victoria Embankment, London, W. C. In addition to this there are other graduate schools and polyclinics in London, Edinburgh, Glasgow and Dublin, each of which offers opportunities for graduate work.

Living in foreign cities is generally reputed to be cheaper than in similar cities in the United States. Much will depend on individual tastes. In general it may be said that service of all kinds is much cheaper. Rent is about the same especially when the extras, which are included in that item in America, are reckoned. Food costs the traveler about the same. The foreigner, unless he can conceal his identity, which is seldom possible, must expect to pay somewhat higher prices than the native. The following are conservative estimates of expenses in Berlin: Room, with board, in a pension or boarding house, from 100 marks ($24) to 200 marks ($48) a month. Room, with breakfast, from 30 to 50 marks a month. In Vienna moderate estimates place the cost of living at about 200 kronen ($40) a month. In London living is a little higher than on the continent, board and lodging costing from £6 ($30) to £7 ($35) a month.

The expenses of instruction in Berlin vary from 40 to 100 marks ($10 to $24) for private courses lasting one month. This includes, usually, an hour's instruction daily, and applies to the vacation courses as well as to those independent of the university. Many of the university courses can be attended free of expense. The expense of instruction in Vienna is rather higher than in Berlin: The average cost is 40 cents an hour; the individual courses vary from $10 to $30. In Paris, expenses for regular instruction include a matriculation fee of $6, and fees for various courses ranging from $10 to $30. Provision is made for those physicians who wish to hear the professor without participating in the course; for these there is no expense. The London Postgraduate Association charges for its joint card of admission a fee of 10 guineas ($52.50) for three months, or 15 guineas ($78.75) for six months. The West London Postgraduate College charges a fee of 5 guineas ($26.25) for three months, or 8 guineas ($42) for six months. In Edinburgh, the fee for the vacation courses of two weeks each, is 3 guineas ($15.75) or for two consecutive courses each of two weeks, 5 guineas ($26.25). At Trinity College, Dublin, a three weeks' summer course is given for which the fee is 5 guineas ($26.25). Arrangements can be made so that a limited number of the class can live in college rooms and dine at the hall at a charge of £1 ($5) a week.

The subject of graduate study has been touched on at various times in THE JOURNAL of the following dates: Aug. 17, 1901, 459; Jan. 10, 1903, 109; May 28, 1904, 1433; July 30, 1904, 341; Nov. 4, 1905, 1419; Nov. 18, 1905, 1594; Oct. 27, 1906, 1391; Jan. 26, 1907, 339. The following are a few of the articles that have appeared in other journals: "Vienna; Its Opportunities for Postgraduate Work," D. Fulton, *Southern California Practitioner*, Los Angeles, October, 1906. "Postgraduate Work in Europe," J. E. Hunt, *Journal of Kansas Medical Society*, Lawrence, October, 1906; "The Vienna Clinics," M. Metzenbaum, *American Medicine*, September, 1906; "A Vienna Letter," R. Elmergreen, *Wisconsin Medical Journal*, October, 1907.

SPECIAL HOSPITAL DIETS.

MORRIS PLAINS, N. J., Oct. 28, 1907.

To the Editor:—In THE JOURNAL, Oct. 19, 1907, page 1349, is a brief notice, "Special Diets in Hospitals." Will you kindly publish the eight different diets spoken of, or inform me where and how I can obtain the list in English. H. A. COSSITT, M.D.

ANSWER.—A committee of leading physicians connected with the Paris hospitals was appointed to study the question of hospital diets. Their reports were published in the *Bull. de la Soc. Méd. des Hôp.*, July 12, 1901, and July 4, 1902. After commenting on the drawbacks of the pre-existing diet schedules, the following eight were suggested:

1. Normal diet, the ordinary mixed diet for patients who have no nutritional disorders or affections of vital organs. A patient with sciatica, incipient tabes or secondary syphilis can eat as in health. Breakfast: milk or bean or pea soup, or coffee with milk, about one-third of a quart (30 centiliters). Dinner: meat 100 gm., dried beans or peas 150 gm., or fresh, 130 gm., with one egg. Supper: soup 30 centiliters, meat 100 gm., or fish 160 gm., fresh beans or peas 160 gm., or potato 240 gm., or rice 20 centiliters, or soft pudding 120 gm. Small slices of bread as desired. Beverage: wine 30 centiliters, or milk, beer or cider, 1 liter.

2. Convalescent diet, for patients recovering from acute infections, typhoid fever, pneumonia, etc., specialized by the prudence necessary in the progressive increase and choice of the articles of food. Breakfast: milk, or coffee with milk, or milk gruel or bouillon, 30 centiliters. Dinner: roast chicken or chop, soft mashed potato or purée of dried beans or peas, 15 centiliters. Supper: milk gruel or soup 30 centiliters, white fish 160 gm., or 2 eggs or brains, stewed fruits or rice cooked in milk. Beverage: milk, 1 liter, or wine, 20 centiliters.

3. Superalimentation diet, which is styled the best means at the command of the profession for the treatment of the tuberculous. The diet is the same as any of the above, plus 2 eggs or sardines in oil, or 100 or 150 gm. raw meat, ground fine, or cheese or butter. The raw meat can be taken in 200 gm. of warm bouillon. This latter item is a recent innovation.

4. Antidiabetic diet. Baked potatoes should be substituted for gluten bread, formerly recommended. The nature of the food is about the same for all diabetics, but the quantity to be allowed varies with the individual tolerance; consequently each diabetic patient must have his individual diet card.

5. Antidyspepsia diet. The main point is to have the food finely divided in case of dyspeptic stomach troubles and dilatation. Breakfast: milk soup 30 centiliters. Dinner: roast meat 100 gm., preferably chopped or ground fine, purée of vegetables 150 gm., or soft puddings 120 gm. Supper: the same, plus a milk or vegetable soup. Beverage: milk, 1.5 liters.

6. Milk-vegetable diet. No special diet is indicated so often as this, the committee declares, and none is so beneficent in its results. It must be regarded as an actual therapeutic triumph, and scarcely a day passes that patients with kidney disease, liver affections, arteriosclerosis, and many others do not benefit immeasurably by it. It comprises 2 liters milk, 4 eggs, 2 milk gruels. Two of the eggs can be replaced by 16 centiliters of a purée of green peas or beans, or 15 centiliters of a purée of some starch food or soft pudding.

7. Exclusive milk diet. This may require from 2.5 to 4 or even 5 liters of milk a day. The milk is not only a food, but a medicine as well, and the best of all in many cases. As a rule, 3.5 liters will be sufficient for men, 3 liters for women, and 2 liters for older children.

8. Salt-free diet. This diet was suggested by the committee as a recent innovation. In the latest communication on the subject, July 5, 1907, Widal remarks that the salt-free diet must vary with different conditions and degrees of heart and kidney disease and dropsy of other origins. The food should be cooked without any salt, and, if a certain amount of salt is allowed, it should be given to the patient separately with the meal. The amount of unsalted bread allowed should be specified for each patient by the physician. The normal No. 1 diet may be ordered, omitting the soup. The amount of meat may be reduced, or the amount of vegetables, rice or "pastes" increased. It might be well to order 50 or 100 gm. of butter, sugar, preserves or raw fruits in place of the omitted meat. On special demand of the physician in charge, various relishes may

be allowed to render the food more appetizing, such as vinegar, lemon, onion or garlic. The milk-vegetable diet, No. 6, might be ordered, without salt, increasing the proportion of mashed vegetables if the amount of milk is reduced to 1 liter a day, or adding butter, sugar, preserves or raw fruits, with unsalted bread. The unsalted diet schedule is thus a very elastic one, and it should be varied and adapted to counteract the insipid taste from the lack of salt. The normal diets for children are classified as follows:

For nurslings: 1 liter of milk.

After weaning: 1.5 liter of milk; 50 gm. of a gruel made with wheat, barley, corn, rye, rice or tapioca or dried beans, peas or lentils; 25 gm. sugar; 1 egg.

For young children: milk, 0.5 liter; bread as desired. Breakfast: milk soup or chocolate, once or twice a week, 25 centiliters. Dinner: 2 eggs or 80 gm. of fish, poultry or roast meat; 80 gm. of a purée of beans or peas or rice; 100 gm. of potato or fresh beans or peas; 50 gm. stewed fruits. Supper: soup, 25 centiliters; from 60 to 80 gm. of vegetables or creams and 50 gm. of stewed fruits or preserves.

For larger children: Bread as desired; 0.5 liter milk. Same as for younger children, except that the amounts of vegetables are increased by 20 gm. and Gruyère cheese is allowed at dinner and 2 eggs at supper or 80 gm. fish or 60 gm. meat.

For convalescents the diet is the same as after weaning or for young children plus 60 gm. of meat or poultry. For superalimentation the diet is the same as for young or older children, plus from 100 to 150 gm. of raw meat.

As mentioned in the notice in THE JOURNAL, page 1349, these special diets have been in use at the Cochin Hospital for four years, and have proved extremely satisfactory. The unsalted diet is, of course, a recent innovation, but the others have established their practical usefulness. The French term in the original communications, "alimentary pastes"—pâtes alimentaires—has been translated soft puddings.

DISTRIBUTION OF PROFESSIONAL CARDS.

——, N. J., Oct. 12, 1907.

To the Editor:—Will you kindly give your opinion on the following in Queries and Minor Notes: I am a graduate of one of the best medical schools, with a two-year hospital service, and two years with an expert eye surgeon. Therefore, I feel fairly competent (?) to assume this branch of medicine in private practice. I shall locate in a city of a hundred thousand. My professional card consists of my name, address, office hours, and the following sentence in small type, "Special attention given to diseases of the eye." These cards are lying on a table in my waiting room. I think I would be justified in mailing my card once, and only once, to families in the immediate neighborhood.

Now, (1) would this conflict with our ethics? (2) Could I do this and still retain a good standing in county medical societies? If this is advertising (quackery), then the cards on my table must be discarded. Why and where is the difference between this unassuming method of informing people that I am living and willing, and my sign, the cards on the table, my driving outfit and medicine case? L. M.

ANSWER.—Our correspondent asks for opinion as to (1) whether he will be justified in mailing his professional card once, and only once, to families in the immediate neighborhood or whether this course would conflict with medical ethics; (2) whether he could still retain a good standing in the county and medical societies if he did it, and, finally (3) what is the difference between that course and having a sign on his house, leaving his cards on his table, and the public attention called to his professional occupation by the necessary character of his driving outfit and medicine case? In reply, we say:

(1) It is in conflict with the spirit of the Principles of Medical Ethics of the American Medical Association, which says: "It is not compatible with honorable standing in the profession to resort to public advertisements or private cards, inviting attention of persons afflicted with particular diseases."

(2) It follows as a matter of course that such action might provoke objection by the members of a county society.

(3) As to the instances that our correspondent adduces as parallel with the mailing of his card to families, there is an important distinction in the fact that all such public notifications are addressed to no one in particular, but merely impersonally to all who may call at the physician's office or chance to see him on his rounds. The addressing of the card, however, to any particular person or group of persons is a special appeal to individuals who may be already under the care of some other practitioner, or who may retain as their family attendant some physician in whom they have confidence. It thus becomes a disturbing element in professional relationship. The door plate, on the other hand, makes appeal to no one person more than to others. It is there merely to advise those who are seeking a physician in general, or a certain physician in particular, where he may be found. In like manner the cards on his table are there for those to take who will, and the mere fact of the person being in the physician's waiting room indicates at least some kind of professional relation. In either case, the individual's attention directs itself to the physician and not the reverse; although even with regard to the displaying of such cards on a waiting-room table, there may be doubts as to its desirability. If the driving outfit calls attention to the physician's profession, it is a consequence of an inevitable cause, though undoubtedly intention may emphasize it to the degree of culpability. It must be clearly stated that there is both an etiquette and an ethics of medicine; that etiquette deals only with those things that constitute what in the social life is generally described as "good form" or "bad form," and is, therefore, largely a varying product of time, place and circumstance; though even so, it can not be dispensed with by those who would maintain professional or social relations, for, more largely on conformity to this than on anything else, depends that important undefinable condition known as congeniality; while ethics is deep rooted in the basic principles of honesty, truth and the golden rule, and anything that is not in strict conformity therewith stands self-condemned.

COMPOSITION OF DOAN'S KIDNEY PILLS.

MARION, KANSAS, Oct. 26, 1907.

To the Editor:—What is the composition of Doan's Kidney Pills? They are put out by the Foster Milburn Co., Buffalo, N. Y.: G. P. MARNER.

ANSWER.—An abstract from the *British Medical Journal* giving analyses of various kidney remedies appeared in THE JOURNAL, Feb. 9, 1907, page 534, and March 16, 1907, page 959, it contained the following in regard to Doan's Kidney Pills:

"Analysis of Doan's Backache Kidney Pills gave results from which the following formula giving a similar pill was constructed:

Oil of juniper	1 drop.
Hemlock pitch	10 gr.
Potassium nitrate	5 gr.
Powdered fenugreek	17 gr.
Wheat flour	4 gr.
Maize starch	2 gr.

Divide in twenty pills.

"Forty pills and four dinner pills sell for 2 shillings and 9 pence (66 cents); the estimated cost is one halfpenny (one cent)."

DOSE OF ANTITOXIN IN VIRULENT DIPHTHERIA.

MOBILE, ALA., Oct. 28, 1907.

To the Editor:—In THE JOURNAL, Oct. 26, 1907, abstract No. 28, p. 1478, under the heading, "Fatal Pharyngeal Diphtheria," there occurs the following: "Harris says that there are certain cases of diphtheria in which fatal ending can with certainty be predicted." Then follows a quotation from the article to which you refer at some length, and following this your comment that "he (Harris) reports six cases. Antitoxin had no effect, though 6,000 units were generally given. He suggests that there may be several kinds of diphtheria bacilli," etc. Surely it is not intended to give the impression that 6,000 units should be sufficient in a virulent or malignant case of diphtheria. If instead, 60,000 units were given, in broken doses during a short period of time, then it might seem that antitoxin would fail possibly because we had to deal with different toxins from those of diphtheria as we usually see it.

It would seem from the abstract referred to that 6,000 units are deemed sufficient to neutralize the toxins elaborated in a severe and virulent type of diphtheria.

I feel sure that the majority of physicians have at times used in some severe and persistent cases as high as 30,000 and even 50,000 units of antitoxin, and always with good results. If antitoxin is given at frequent intervals and freely, it very seldom fails to save the patient when treatment is not too long deferred. In three cases, comparatively recently, I have used between 35,000 and 50,000 units. G. H. FONDE, M.D.

ANSWER.—The number of units stated in the abstract referred to is the number given in the original article. In the abstract department of THE JOURNAL the aim is to give a sufficiently full abridgment of the article so that readers may draw their own conclusions as to the worth of the article. No attempt is usually made at criticism, either favorable or unfavorable, of the views set forth, and the statements in the abstracts must be taken as those of the author, but are not to be regarded as necessarily expressing the opinion of THE JOURNAL on medical subjects. In justice to Dr. Harris, it may be said that in some of the cases which he reports as much as 8,000 units were given. It is, of course, recognized that in severe cases of diphtheria much larger doses may be given without harm and sometimes with benefit.

COMPOSITION OF KARGON.

SOUTH SHORE, S. D., Nov. 1, 1907.

To the Editor:—Can you give me the analysis of compound kargon? I think you gave it some time ago, but I can not locate it now. People appear at our local drug store every day with this cunningly worded ad. M. J. HAMMOND, M.D.

ANSWER.—An analysis of kargon was published in THE JOURNAL, March 16, 1907, page 967. From the reports of the chemists who

analyzed the preparation it appears that potassium acetate and buchu are the essential constituents. One chemist (quoted in previously published report of analysis) stated: "This wonderful remedy, then, seems to be acetate of potash, about 15 grains to each teaspoonful, and fluid extract of buchu." Another (also quoted) stated: "Kargon contains buchu, potassium acetate, glycerol, and 18 per cent. alcohol."

GERMAN MEDICAL JOURNAL.

PULLMAN, WASH., Oct. 30, 1907.

To the Editor:—Will you recommend a German medical (monthly) journal suitable for one beginning to read German medical literature? I should like to know name and address of publishers, cost, etc. H. P.

ANSWER.—The *Therapie der Gegenwart* is published by Urban & Schwarzenberg, Berlin, N. 24, Friedrichstrasse, 105. The price is 10 marks ($2.40). The *Therapeutische Monatshefte* is published by Julius Springer, Berlin, N. Montbijouplatz, 3, at the price of 12 marks ($3.00). These journals are devoted to therapeutics but contain very practical articles often including diagnosis as well as treatment. The *Zeitschrift für Aerztliche Fortbildung* is a postgraduate journal published fortnightly by Gustav Fischer, in Jena. The price is 5 marks for six months. There are a number of good periodicals appearing irregularly but generally about once a month. One of the best of these is the *Deutsches Archiv für klinische Medicin*. It is a journal of high scientific value and the articles are generally long, but they usually have excellent summaries. The price is 16 marks ($4.00) a volume of six numbers. The publisher is F. C. W. Vogel, Leipsic. All these prices are without foreign postage, which is extra.

WALKING THE PATIENT TO COMBAT OPIUM NARCOSIS.

UNION SPRINGS, ALA., Oct. 28, 1907.

To the Editor:—In THE JOURNAL, Oct. 26, 1907, p. 1460, in answer to a question regarding "Apomorphin as an Emergency Emetic in Opium Poisoning," you say: "Also it should be remembered that a patient suffering from serious opium poisoning should not be walked about or subjected to severe exercise." Should patients suffering from opium poisoning ever have such treatment? If so, why, from a physiologic point of view? If not in the severe cases, why in the milder ones? I have wanted these questions answered ever since I heard my professor lecture on opium poisoning some twelve years ago and have never had any confidence in keeping the patient awake saving a single life. If we were to use all the other agents usually prescribed in such cases and allow the patient rest, conserving the strength of the heart and respiratory muscles, would not just as many patients recover? My experience tells me so, whatever that may be worth. J. C. BOWMAN.

ANSWER.—We doubt the wisdom of the term "mild" as our correspondent uses it. How is one to know that a certain patient is only suffering from a *mild* case of opium poisoning? If the symptoms are not serious and there is no profound narcosis, we are still unable to determine how much opium is being or has been absorbed, consequently gentle stimulation or some slight amount of walking will keep the patient awake and aid him in eliminating the opium, whereas if he is allowed to go to sleep the breathing becomes very shallow and artificial respiration often becomes necessary. The violent exercise that is sometimes recommended is certainly dangerous.

RECIPROCITY WITH WEST VIRGINIA.

———, Nov. 5, 1907.

To the Editor:—With what states has West Virginia established reciprocity? J.

ANSWER.—West Virginia reciprocates with Illinois, Indiana, Iowa, Michigan, North Dakota, South Carolina and Virginia.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending Nov. 9, 1907:

Straub, Paul F., surgeon, detailed to represent the Medical Department of the Army at the Third International Sanitary Conference, to be held in the city of Mexico, on Dec. 2, 1907.

Phillips, John L., surgeon, reports on forty-eight days' leave of absence since Oct. 28, 1907, from Ancon, Canal Zone, Isthmus of Panama.

Eastman, William R., asst.-surgeon, ordered to report in person to the president of the Army Medical School for temporary duty until Nov. 17, 1907.

Smart, William M., asst.-surgeon, granted leave of absence until Dec. 1, 1907.

Eastman, William R., asst.-surgeon, reported for temporary duty at Army Medical School, Nov. 5, 1907.

Jones, Percy L., asst.-surgeon, relieved from duty at Camp Captain John Smith, Jamestown Exposition, Va., and left on ten days' leave of absence.

The following named assistant surgeons are relieved from duty at posts designated after their names, and will proceed to Vancouver Barracks, Wash., for duty with the 14th Infantry to the Philippine Islands; Captains Louis T. Hess, Fort Porter, N. Y.; R. F. Metcalfe, Columbus Barracks, Ohio; and Will L. Pyles, Jefferson Barracks, Mo. On arrival at Manila the officers named will report in person to the commanding general, Philippines Division, for assignment to duty.

The following named assistant surgeons are relieved from duty in the Philippines Division, Feb. 15, 1907 [1908?—Ed.], and on arrival at San Francisco will report by telegraph to the Adjutant General of the Army for further orders: Captains Thomas S. Bratton and Wallace De Witt, and First Lieut. Herbert C. Gibner.

Wall, Francis M., contract surgeon, returned to Fort Oglethorpe, Ga., from temporary duty at Fort Moultrie, S. C.

Wells, Francis M., contract surgeon, returned to Fort Robinson, Neb., from temporary duty at Fort Mackenzie, Wyo.

Anderson, Everett A., contract surgeon, ordered to Fort Wingate, N. M., for duty.

Hewitt, John M., contract surgeon, ordered to Presidio of San Francisco, for duty.

Tyler, George T., contract surgeon, granted leave of absence from November 5 to 18.

Delacroix, Arthur C., contract surgeon, relieved from duty in the Department of California, and ordered to Manila, P. I., for duty in the Philippines Division.

Gunckel, George I., dental surgeon, left Fort Screven, Ga., and arrived at Fort Fremont, S. C., for duty.

Voorhies, Hugh G., dental surgeon, left Fort D. A. Russell, Wyo., on sick leave of absence for two months.

Whitney, Walter, contract surgeon, left Fort McPherson, Ga., on practice march for twenty-one days.

Daywalt, George W., contract surgeon, granted leave of absence for ten days.

Kelly, John P., contract surgeon, returned from duty in Sequoia National Park, Cal., and ordered to Fort Miley, Cal., for duty.

Leeper, John F., contract surgeon, returned from sick leave of absence to treatment at Army General Hospital, Fort Bayard, N. M.

Coffey, Albion McD., contract surgeon, ordered to duty at Vancouver Barracks, Wash.

Hull, Alva R., contract surgeon, returned to Fort Logan, Colo., from leave of absence.

A board to consist of Havard, Valery, asst.-surgeon general; Knight, John T., major and quartermaster; Stanley David S., major and quartermaster; Straub, Paul F., surgeon; Darnall, Carl R., asst.-surgeon, is appointed to investigate medical materials indicated, and to recommend the types best adapted to the conditions of service in the field: (1) wheel vehicles, including ambulances, medical wagons, and transport wagons for the Hospital Corps; (2) means of transportation for the sick and wounded in the service of the rear, including vehicles of various types, trains, boats, ships, etc.; (3) pack transportation of medical supplies for the service of the front, and (4) hospital tents.

Navy Changes.

Change in Medical Corps, U. S. N., for the week ending Nov. 9, 1907:

Bagg, C. P., surgeon, detached from Naval Medical School, Washington, D. C., and ordered to the *Philadelphia*, December 7.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 6, 1907:

Stoner, G. W., surgeon, granted leave of absence for 3 days, under Paragraph 189, Service Regulations.

Stoner, G. W., surgeon directed to report at Bureau for special temporary duty, Nov. 11, 1907, on completion of which to rejoin his station at Ellis Island, N. Y.

White, J. H., surgeon, leave of absence granted for 30 days from Aug. 29, 1907, amended to read for 26 days only.

Williams, L. L., surgeon, bureau order directing him to report at the bureau for special temporary duty, November 4, 1907, revoked.

Lavinder, C. H., P. A. surgeon, directed to report at the bureau, for special temporary duty, on completion of which to rejoin his station at Wilmington, N. C.

Grubbs, S. B., P. A. surgeon, excused from duty for one year, without pay, from Nov. 2, 1907.

Anderson, J. F., P. A. surgeon, granted 3 days' extension annual leave, on account of sickness, from Oct. 31, 1907.

Holt, J. M., P. A. surgeon, granted 2 days' leave of absence.

Schereschewsky, J. W., P. A. surgeon, directed to report at the Bureau, Nov. 11, 1907, for special temporary duty, on completion of which to rejoin his station at Baltimore.

McLaughlin, A. J., P. A. surgeon, directed to proceed to Rome, Italy, for special temporary duty, on completion of which to rejoin his station at Naples, Italy.

Ashford, F. A., asst.-surgeon, granted 5 days' leave of absence under Paragraph 189, Service Regulations.

Brinckerhoff, W. R., Director Leprosy Investigation Station, Molokai, Hawaii, directed to proceed to Molokai for special temporary duty, on completion of which to return to Honolulu.

Hamilton, H. J., acting asst.-surgeon, granted 5 days' extension leave of absence on account of sickness, from October 5, 1907.

Hunter, W. R., acting asst.-surgeon, granted leave of absence for one day.

Keatley, H. W., acting asst.-surgeon, granted 7 days' leave of absence, October 20-24, inclusive, and October 29-31, 1907, under Paragraph 210, Service Regulations.

Light, S. D. W., acting asst.-surgeon, leave granted for 17 days from Nov. 14, 1907, revoked.

Safford, M. V., acting asst.-surgeon, directed to report at the Bureau, Nov. 11, 1907, for special temporary duty; on completion of which to rejoin his station at Boston.

BOARD CONVENED.

A board of medical officers was to meet at the Bureau, 10 o'clock a. m., Monday, Nov. 11, 1907, for the purpose of considering and making recommendation for the revision of the Book of Instructions for the medical inspection of immigrants. Detail for the board: Asst. Surgeon-General H. D. Geddings, chairman; Surgeon G. W.

Stoner, P. A. Surgeon J. W. Schereschewsky, Acting Asst.-Surgeon M. V. Safford, recorder, Nov. 4, 1907.

Health Reports.

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 8, 1907:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 18-26, 1 case.
Colorado: 4 counties, Sept. 1-30, 9 cases, 2 deaths.
Illinois: Chicago, Oct. 27-Nov. 2, 2 cases; Springfield, Oct. 25-31, 2 cases.
Indiana: Elkhart, Oct. 20-26, 2 cases; Indianapolis, Oct. 22-27, 1 case.
Kansas: Kansas City, Oct. 20-26, 1 case.
Louisiana: New Orleans, Oct. 20-26, 1 case.
Missouri: St. Joseph, Oct. 20-26, 3 cases.
Montana: 14 counties, June 1-Sept. 30, 57 cases.
New Jersey: Newark, Oct. 20-26, 3 cases.
Ohio: Cincinnati, Oct. 26-Nov. 1, 2 cases.
Tennessee: Nashville, Oct. 20-26, 1 case.
Texas: San Antonio, Oct. 20-26, 3 cases.
Virginia: 3 counties, Sept. 1-30, 5 cases.
Washington: Spokane, Oct. 20-26, 1 case; Tacoma, 1 case.
Wisconsin: La Crosse, Oct. 20-26, 1 case; Milwaukee, Oct. 23-29, 1 case.

SMALLPOX—FOREIGN.

Africa: British South Africa, Cape Town, Sept. 15-21, 1 case; Portuguese East Africa, Lorenzo Marquez, Aug. 1-31, 2 deaths.
Austria: General, Oct. 6-12, 3 cases; Vienna, 3 cases, 1 death.
Brazil: Para, Oct. 13-19, 12 cases, 10 deaths.
Canada: Halifax, Oct. 20-26, 1 case; Hamilton, Oct. 20-26, 1 case.
Ecuador: Guayaquil, Oct. 6-12, 3 deaths.
France: Cannes, July 1-Sept. 30, 19 cases, 4 deaths.
Germany: General, Sept. 8-28, 8 cases, 1 death.
India: Bombay, Oct. 2-8, 12 deaths; Calcutta, Sept. 15-21, 2 deaths.
Italy: General, Oct. 4-10, 139 cases; Catania, Oct. 11-17, 1 death.
Java: Batavia, Sept. 15-21, 15 cases, 3 deaths.
Malta: Valletta, Oct. 6-12, 1 case.
Mexico: Aguas Calientes, Oct. 20-26, 2 deaths; Mexico City, Sept. 13-21, 4 deaths.
Peru: Lima, to Oct. 3, 47 cases.
Portugal: Lisbon, Oct. 6-12, 3 deaths.
Russia: Moscow, Sept. 22-Oct. 5, 1 case, 1 death; Riga, July 1-31, 3 deaths.
Spain: Almeira, Sept. 1-30, 5 deaths.
Turkey in Europe: Constantinople, Oct. 8-15, 1 death.
Turkey in Asia: Smyrna, June 11-Sept. 30, 18 deaths.

CHOLERA.

India: Bombay, Oct. 2-8, 12 deaths; Calcutta, Sept. 15-21, 31 deaths; Cochin, Aug. 17-Sept. 6, 5 deaths; Madras, Sept. 28-Oct. 4, 98 deaths; Rangoon, Sept. 22-28, 7 deaths.
Japan: Yokohama, Oct. 1-7, 14 cases, 12 deaths.
Russia: Kief, Sept. 22-Oct. 10, 97 cases, 10 deaths; Rostow, Sept. 19-Oct. 4, 32 cases, 28 deaths.
Siam: Bangkok, Aug. 1-31, 17 cases, 12 deaths.

YELLOW FEVER.

Brazil: Manaos, Oct. 6-12, 4 deaths; Para, Oct. 13-19, 4 cases, 3 deaths.
Cuba: Camaguey Province: Ciego de Avilla, Sept. 30-Nov. 5, 1 case, 1 death; Habana Province: Guines, Oct. 31-Nov. 4, 1 case, 1 death; Matanzas Province: Alacranes, Oct. 29-Nov. 2, 1 case, 1 death; Cienfuegos, Oct. 31, 1 case, 1 death; Matanzas City, Nov. 2, 1 death.

PLAGUE—UNITED STATES.

California: San Francisco, Oct. 29-Nov. 5, 6 cases, 5 deaths.

PLAGUE—FOREIGN.

Algeria: Oran, to Sept. 30, 16 cases, 4 deaths.
Australia: Cairns, Sept. 4-9, 2 cases, 1 death.
Egypt: Alexandria, Sept. 28-Oct. 14, 7 cases, 5 deaths; Port Said, Sept. 26-Oct. 14, 2 cases, 2 deaths.
India: General, Sept. 8-14, 9,754 cases, 7,080 deaths; Calcutta, Sept. 15-21, 11 deaths; Rangoon, Sept. 22-28, 17 cases.
Peru: Callao, Sept. 27-Oct. 2, 10 cases, 8 deaths; Lima, 2 cases, 1 death; Mollendo, 1 case, 1 death; Paita, 6 cases, 6 deaths; Piura, 4 cases; San Pedro, 3 cases; Trujillo, 11 cases, 8 deaths.
Siam: Bangkok, Aug. 1-31, 1 case, 1 death.
Turkey in Asia: Mitylene, Sept. 1-Oct. 18, 4 cases; Smyrna, Aug. 6-12, 5 deaths.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

NOSTRUMS IN KENTUCKY.

Systematic and Active Campaign Against Medical Frauds Begun By Medical Societies.

The Kentucky State Medical Association and its component county societies have taken up, energetically and systematically, the fight against nostrums, nostrum venders and nostrum advertisers. In the November *Kentucky Medical Journal* is the following editorial, entitled "The Year's Fight," in which are given the resolutions recommended by the committee on pharmacology and adopted by the house of delegates of the state association at its recent session. The editorial is as follows:

Having the insurance fight won, excepting only as against the New York Life, which is practically out of business in the state, our best energies, as individuals and as an organization, are to be devoted this year, by direction of the House of Delegates, to securing pure drugs and to ridding ourselves of nostrums. The resolutions published herewith are direct and to the point. No doubt is left as to their meaning. It is particularly urged that you refuse to receive from the postoffice copies of trade journals. Many of the great pharmaceutical houses get out such sheets and send them to physicians, hoping to lure them into the use of their specialties. Most of these specialties, and all such so-called journals are conceived in fraud and brought forth in iniquity. Refuse to accept them and thus help to kill them.

Next, look through the pages of every medical journal to which you subscribe, whether it belongs to a state or other organization, or is supported by the members of the National Proprietary Association, the "patent medicine" venders' collusive family, or what not, and if you find the nauseating advertisements of the blatant frauds already exposed by the Council on Pharmacy and Chemistry, write a personal letter to the editor, the publisher and each collaborator, calling their attention to such frauds. Do not talk about it! Write, and write to-day, and help to save our honorable profession from the vampires who exploit it, to its own shame and dishonor.

In addition to this, we have arranged with the American Medical Association to keep a supply of the Physicians' Manual of the Pharmacopeia and the National Formulary, recently prepared by Mr. Hallberg, on hand in our *Journal* office. Send 50 cents in money or stamps, and by return mail we will send you not only this valuable book, but also the latest revision of the list of "New and Non-Official Remedies," approved by the Council on Pharmacy and Chemistry of the American Medical Association. In one of these two books will be found every medical agent necessary to any intelligent doctor. As suggested by one member at this meeting, let each of us get these little books and learn the honest remedies, that it may not be necessary to rely on the nostrums and our own ignorance.

Read these resolutions carefully, and, by the same concert of action as won the insurance fight, do your best share toward winning this one. "United we stand, divided we fall!"

Here follow the resolutions referred to, which were published in THE JOURNAL, Oct. 26, 1907, page 1466:

Following this action on the part of the state association, circular letters have been sent by the county secretary to each member of a component county society, asking for an expression of opinion on this subject as well as a pledge of support and cooperation. In this way a referendum vote of the entire membership of the state association can be quickly and accurately taken. The letter from the county secretary reads as follows:

OFFICE OF THE——————COUNTY MEDICAL SOCIETY,
——————Ky., ——————190—

My Dear Doctor:—No question has ever been presented to our profession of anything like the importance of the nostrum and proprietary medicine frauds. State and county societies are taking action all over the country, but Kentuckians desire to take the same effective and concerted action that has made our profession so successful in all its undertakings. In opposition to us is the American Proprietary Association and some of the low-grade drug organizations, but with a solid medical profession, and the support of the better element of the druggists, we need have no fear of the result.

If all the profession were members of our county society, or a similar one (and we trust they soon will be), and attended the meetings, so as to take part in its deliberations and actions, it would settle such matters. Of course, you will see the importance of the widest possible adoption of these resolutions, and to that end we are sending a copy to all reputable physicians. I ask you to vote for them and sign your name at the bottom of the next sheet, which is a pledge on your part that, when adopted by our profession, you will loyally stand for the faithful carrying out of the resolutions.

The Council on Pharmacy and Chemistry is employed by the medical profession and is working for them. Arrangements have been made so that the *Kentucky Medical Journal* can supply you with a copy of the "Physicians' Manual of the U. S. P. and N. F." together with the latest revision of the "New and Non-Official Remedies," all for 50 cents. Either send the money direct to the *Journal* at Bowling Green, or to me, and I will send in the order for our county together.

It is now up to the individual doctors of the country as to whether they shall make effective the work and views of our representatives who have given the matter special study. Are you not willing to stand by them?

The result of this referendum will be published in the *Journal* of our State Society and THE JOURNAL of the American Medical Association. Please sign your name to the enclosed resolutions and mail them to me in the enclosed envelope so I can get them by next mail.

This will be a harder fight on our part than the insurance fight, but it means a thousand times more to our profession when it is won.

Be sure to send me your ballot by next mail. "United we stand, divided we fall." Very respectfully,

——————
Secretary.

Enclosed in each letter are the following resolutions with a space at the bottom for the signature of the individual mem-

ber by which he can indicate his endorsement of the action of the state House of Delegates:

WHEREAS, Through the cupidity and avarice of drug manufacturers, many nostrums and so-called proprietary medicines have been put on the market and used by doctors in the treatment of sick people; and

WHEREAS, The majority of the physicians of the United States, acting in their organized capacity through the American Medical Association, which is composed of the county and state medical societies of the country, have established a Council on Pharmacy and Chemistry whose sole purpose is to examine new preparations not in the United States Pharmacopeia or National Formulary for their chemical and pharmaceutical purity; and

WHEREAS, The said council has examined many hundreds of such preparations and have found the large majority of them to be fraudulent or worthless, or both, and has published a list of those which it has approved; now, therefore, be it

Resolved, That the ———— County Medical Society, and the medical profession in sympathy with it, in session assembled, hereby expresses its confidence in the Council on Pharmacy and Chemistry of the American Medical Association, and, in order to make its work of force and effect among the physicians of this community and their sick and afflicted patrons; be it further

Resolved, That in so far as may be practicable, we, and each of us, will confine our prescription writing and use of drugs to those preparations contained in the United States Pharmacopeia and National Formulary, which have been established as the law of the land by the national pure Food and Drugs Act, and that we will not use, or permit to be used, any proprietary preparation until it has received the approval of the Council on Pharmacy and Chemistry of the American Medical Association; and be it further

Resolved, That we condemn the acceptance of advertisements of fraudulent nostrums and proprietaries by the medical and religious press, and that we, and each of us, decline to receive any copy of any medical or drug journal, whether owned and controlled by a medical society, laymen, druggists or doctors, which advertises such preparations after Jan. 1, 1908.

We, the undersigned, and each of us, hereby pledge ourselves to abide by the above resolutions and to use no medical preparations which are not contained in the official United States Pharmacopeia or National Formulary, or in the list of "New and Non-Official Remedies," approved by the Council on Pharmacy and Chemistry of the American Medical Association; and that we will subscribe for no medical or religious journal, nor will we receive such a journal from the postoffice, which advertises fraudulent or worthless nostrums and proprietary medicines after Jan. 1, 1908.

That these resolutions be forwarded to the *Kentucky Medical Journal* and THE JOURNAL of the American Medical Association for publication in order to show to the profession of the country that the physicians of Kentucky propose to free themselves of this curse and danger to themselves and their patients.

(Signed) ————————————.

In reporting the action of his state association, Dr. A. T. McCormack, the state secretary, says: "Our county society met yesterday afternoon and unanimously signed the resolutions for county societies. We have had one rather curious experience. There was not a druggist in Bowling Green who had the drugs to fill the U. S. P. and N. F. prescriptions, and they have kept the telephone and telegraph wires busy since we have commenced writing these prescriptions."

Certainly no further comment is needed to show the condition to which the medical and pharmaceutical professions have been reduced by the growth of the nostrum evil. Many druggists, owing to the character of physicians' prescriptions, have found it unnecessary and a needless expense to keep many of the U. S. P. preparations on their shelves, but have been obliged to invest a great many dollars in worthless proprietary preparations which they were compelled to carry because physicians prescribed them.

Unregistered Practitioners in Maryland.

The *Maryland Medical Journal*, October, contains an article by Dr. Herbert Harlan, president of the State Board of Medical Examiners, on the efforts made by his board to prosecute unregistered practitioners in Baltimore. A committee of the Baltimore City Medical Society was appointed in 1906 to assist the State Board. Detectives were employed to obtain evidence and the cases were presented to the grand jury. Dr. Harlan states that the custom of referring cases to the state's attorney's office did not prove successful. The case of Karl Klasius, against whom the board had accumulated evidence, was apparently not pressed by the state's attorney. Klasius was indicted on June 1, 1906. The state's attorney inquired whether or not, if the man should pass the examination, the board would drop the prosecution. He failed to pass, as he had done several times previously. The state's attorney then asked the president of the board if he would consent to have the case settled, as Klasius had left the state. Inasmuch as Klasius had made a number of promises to the board which he had not kept, this proposition was declined. He again appeared at the December examination of the board and again failed to pass. The case was then dropped on condition that he remain out of the state of Maryland.

The committee printed a thousand circulars, containing a list of the registered physicians of Baltimore, which list was placed in the public libraries and distributed to physicians. Copies of the list were given to each day policeman in the city, with instructions to report the name of any physician exhibiting a sign and whose name did not appear on the list. In this way the names of fifteen unlicensed practitioners were obtained, eleven of whom were indicted in October. Dr. Harlan says: "In spite of all efforts of the committee and their council, not one of these cases has as yet been tried. Three left the city, one has been registered, after having shown proper registration from one of the counties; one passed the December examination, and one pleaded guilty and was fined $10 and costs. Three were colored and should probably be classed as herb doctors and chiropodists. One was a fortune teller and was convicted on that charge. In March five additional cases were sent to the grand jury. All were indicted, but not one of the cases has been brought to trial." Dr. Harlan, in summarizing the results, says: "There is sufficient law to cover the cases, but little public sentiment in its favor, while the present state's attorney would appear to be indifferent to the interests of the general public and the profession as far as the medical practice act is concerned."

[Since the above was put in type there has been a reply by the state's attorney and further comment by Dr. Harlan. These were mentioned in THE JOURNAL, November 9, p. 1613.]

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Second Month.

FOURTH WEEKLY MEETING.

Gunshot Injuries of Head.

Character of wound, wound of entrance, wound of exit, effect on inner and outer tables, effect on meninges, effect on brain substance, hydraulic and hydrodynamic pressure. Differences of effects of leaden and jacketed missiles. Effect of initial velocity and range.

Symptoms: Areas of brain involved.

Medicolegal interest in pistol-shot wounds.

Treatment: Disinfection. Indications for trephining. *X*-ray.

Intracranial Hemorrhage.

Extradural Hemorrhage: Middle meningeal artery and branches. Character of wounds, by "contrecoup." Effects of hemorrhage, local and general.

Symptoms: Mental disturbances, "free interval," pulse, respiration, motor disturbances, sensory disturbances, pupils.

Treatment: In compound fracture, indications and technic. In internal hemorrhage, indications for trephining. Kronlein's "sites of election," method of localization.

Subdural Hemorrhage: Pial vessels, branches. Character of injuries. Extent of hematoma, quantity, absorption. Differentiate from supradural—(1) free interval, (2) pulse, (3) motor disturbances, (4) localizing symptoms.

Traumatic Meningitis.

Etiology: Injury, micro-organisms present, mode of entrance.

Pathology: Leptomeningitis, character of exudate, extent, cortex. Pachymeningitis, changes in dura, exudate, origin.

Symptoms: Early and late. Cortical or basilar. Chills and fever, headache, pulse, nausea and vomiting, pupils, delirium, stupor, coma.

Raise Insurance Fees.

The State Mutual Life Assurance Company of Worcester, Mass, which hitherto has paid a fee of $5 for medical examinations except in a few counties in Massachusetts, where the rate for a few years past has been $3, announces that it has raised the fee in these counties to $5, thus making that amount the universal rate throughout its entire field.

Marriages

ALBERT CUSHMAN DAY, M.D., to Miss Estelle M. Callahan, both of Boston, October 23.

HENRY E. MÉNAGE, M.D., to Miss Henrietta Mueller, both of New Orleans, October 23.

JAMES A. KING, M.D., to Miss Minnie Billington, both of Manistee, Mich., October 20.

BENJAMIN P. BRODIE, M.D., Detroit, Mich., to Mrs. Tubbs of Washington, D. C., November 14.

GEORGE W. YEATON, M.D., to Miss Edna Belle Andrews, both of Medway, Mass., October 30.

LLEWELLYN M. HINSHAW, M.D., to Miss Lillie Bosanko, both of Bennington, Kan., November 14.

HERBERT C. HANING, M.D., Dayton, Ohio, to Miss Ella Holman of Kokomo, Ind., October 30.

J. ERNEST KEYWORTH, M.D., to Miss Elizabeth L. Hackney, both of Govanstown, Md., October 22.

FREDERICK BUCHE, M.D., Richmond, Ind., to Miss Cecelia Meagher, of Louisville, Ky., October 30.

W. BURRETTE KITCHEN, M.D., Indianapolis, to Miss Edith Thornton Scott of Holton, Kan., October 23.

EMIL BERNARD ANDERSON, M.D., to Miss Harriet Radcliffe Going, both of Chicago, November 6.

H. A. STEWART, M.D., Alba, Mich., to Miss Anna M. Vandecar of North Branch, Mich., October 23.

ALBERT ROY BICKSTEIN, M.D., to Miss Claire Rosalind Uditsky, both of Philadelphia, October 23.

ROBERT E. HOLMES, M.D., Harrisburg, Pa., to Miss Ella Black, at Waterstreet, Pa., October 23.

HILL HASTINGS, M.D., Los Angeles, Cal., to Miss Mary Garvin Brown of Louisville, Ky., October 23.

DANIEL ALVEY WATKINS, M.D., to Miss Flora Savilla Gassman, both of Hagerstown, Md., October 23.

HENRY L. DAVIS, M.D., Herrin, Ill., to Miss Tallie M. Link of Ewing, Ill., at East St. Louis, Ill., October 24.

FRANK MEEKER RUMBOLD, M.D., St. Louis, Mo., to Miss Susan McCord of St. Joseph, Mo., October 26.

DAVID E. BAIRD, M.D., Saginaw, N. C., to Miss Sarah A. Whitney of Vermont, at Bristol, Va., October 30.

J. MURRAY HOUTZ, M.D., Berwick, Pa., to Miss Harriet E. Shoemaker of Wilkes-Barre, Pa., in August last.

DUNCAN ROBERT MACMARTIN, M.D., Chicago, to Miss Laura Mae Whitrock of Stevens Point, Wis., November 5.

ROBERT CLENDENNIN MCCLYMONDS, M.D., to Miss Beulah Buchanan Gilchrist, both of Walton, Kan., October 30.

WILLIAM GWATHMEY, M.D., King William County, Va., to Miss Estelle Garnett Ellis, at Lloyds, Va., October 30.

DONALD MCCASKEY, M.D., Witmer, Pa., to Miss Clyde L. Hooper of Atlantic City, N. J., at Lancaster, Pa., November 1.

JOHN JOSEPH MOOREHEAD, M.D., New York City, to Miss Helen Armstrong Howell of New Brunswick, N. J., October 31.

LEONARD PASSANO, M.D., Baltimore, Md., to Miss Eleanor O'Connor of Washington, D. C., at Wilmington, Del., October 21.

WILLIAM ALMON SHEPHERD, M.D., Richmond, Va., to Miss Margaret Irene Anne Bowie of Caroline County, Va., October 29.

Deaths

Frank Heuel, M.D. New York University Medical School, New York, 1875; a member of the American Medical Association; an honor man of his year, to whom were awarded the Budd prize on obstetrics and the Piffard prize on dermatology; who was associated with the health department in the city of New York; attending surgeon at the Demilt Dispensary and at the Eastern Dispensary; lecturer on operative surgery and bandaging, and professor of clinical surgery and prosector to the chair of general surgery in the Medical Department of the University of the City of New York; for many years consulting surgeon to the City Hospital and Randall's Island Hospital; a member of many learned societies; died at his home in New York City, October 28, aged 52.

Linnaeus Fussell, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1867; a member of the American Medical Association; secretary of the Delaware County (Pa.) Medical Society for 33 years; from 1865 to 1868 acting assistant surgeon and from 1868 to 1874 passed assistant surgeon in the U. S. Navy; secretary of the board of health of Media, Pa., and secretary of the Delaware County Institute of Science; died at his home, October 28, aged 65.

Mark L. Nardyz, M.D., University of Padua, Italy, 1850; a member of the International Medical Congress, Washington, D. C., 1882; who had seen service in the Italian and French armies, and is said to have been a medical officer in the U. S. Navy during the Spanish-American War; for many years a practitioner of Pittsburg and Kansas City, died suddenly in Scranton, Pa., from heart disease, aged October 29, aged 70.

John F. Hess, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1856; assistant surgeon of the Ninety-sixth Ohio Volunteer Infantry and the Fifteenth U. S. Infantry during the Civil War, in which he voluntarily was taken prisoner, in order to care for wounded men of his command; for many years a practitioner of Great Bend, Kan.; died at his home in that place, October 17, aged 77.

John Preston Park, M.D. Hospital College of Medicine, Louisville, 1877; a member of the Tennessee State Medical Association and Washington County Medical Society; for two terms city physician of Knoxville, Tenn., and later a practitioner of Johnson City, died in Johns Hopkins Hospital, Baltimore, November 1, from disease of the stomach, a few days after a surgical operation, aged 57.

Henry C. Boenning, M.D. Jefferson Medical College, Philadelphia, 1879; a member of the American Medical Association; founder of the Garretson Hospital; sometime port physician of Philadelphia, and later quarantine physician of the state; a member of the staff of many hospitals, and an instructor in various medical colleges of Philadelphia; died at his home in that city, November 4, aged 50.

Alexander Caldwell, M.D. Jefferson Medical College, Philadelphia, 1869; a member of the Medical Society of the State of Pennsylvania and the Philadelphia County Medical Society; surgeon of the Tenth Missouri Volunteer Infantry during the Civil War; prominent as a philanthropist of Philadelphia; died at his home November 2, of cerebral hemorrhage, after an illness of one week, aged 63.

Seth Delbert Close, M.D. College of Physicians and Surgeons in the City of New York, 1876; a member of the medical societies of the State and County of New York; while suffering from melancholia due to overwork, is said to have died at his home in New York City, from the effects of strychnin self administered, October 29, aged 56.

John Edwin Goggins, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1895; demonstrator of anatomy in his alma mater; health officer of Okanogan County, Wash.; formerly local surgeon at Tomah, Wis., for the Chicago, Milwaukee & St. Paul Railway, died suddenly at his home in Conconully, Wash., October 20, aged 33.

Osmer M. Willis, M.D. Columbus (Ohio) Medical College, 1882; a member of the Ohio State and Washington County medical societies; founder and for many years in charge of Washington Hospital, Marietta, Ohio; died in that institution, October 30, from angina pectoris, five days after an operation for abscess of the liver, aged 47.

William H. Saunders, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1865; a member of the Wisconsin State and Kenosha County medical societies; for ten years professor of chemistry at the University of Kansas, Lawrence; died at his home in Kenosha., October 29, after a long illness, aged 66.

William Kinner, M.D. Marion-Sims-Beaumont College of Medicine, St. Louis, 1902; a member of the American Medical Association, and health officer of Ferguson, Mo.; while suffering from mental aberration, October 31, jumped from a window in his house and was instantly killed, aged 33.

George B. Hammond, M.D. Detroit (Mich.) College of Medicine, 1890; for several years a member of the village council, school inspector, health officer of Royal Oak, Mich., died at his home in that place, October 22, from disease of the stomach, after an illness of several months, aged 40.

Harry W. Hutto, M.D. Central College of Physicians and Surgeons, Indianapolis, 1905; a member of the Indiana State and Tipton County medical societies; while nutting, fell from a tree at Sharpsville, October 23, breaking his neck, and died from the injury October 28, aged 29.

John Russell, M.D. Albany (N. Y.) Medical College, 1864; assistant surgeon of the Sixty-fourth New York Volunteer

Infantry during the Civil War; for many years a practitioner of Ouray, Colo.; died suddenly from angina pectoris in Denver, October 28, aged 67.

Charles Mohr, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1875; a member of the American Public Health Association; professor of materia medica and registrar of his alma mater, and general director of Hahnemann Hospital, fell dead on the street in Philadelphia from heart disease, October 31, aged 63.

Amos W. Reagan, M.D. Medical College of Ohio, Medical Department of the University of Cincinnati, 1851; surgeon of the Seventieth Indiana Volunteer Infantry during the Civil War; died at his home in Mooresville, Ind., from pneumonia, October 28, aged 81.

John F. MacEttrick, M.D. Long Island College Hospital, Brooklyn, 1881; a member of the medical societies of the state and county of New York, died at his home in South Boston, Mass., October 22, after an illness of more than a year.

William Moss, M.D. Jefferson Medical College, 1855; a member of the Medical Society of the State of Pennsylvania and Philadelphia County Medical Society; surgeon of the Sixth Pennsylvania Volunteer Cavalry during the Civil War; died at his home in Chestnut Hill, Philadelphia, October 30, aged 74.

John S. Ingram, M.D. University of Michigan, College of Medicine and Surgery, Ann Arbor, 1877; a member of the Michigan State and Muskegon County medical societies; formerly a practitioner of Bailey, died at his home in Grand Rapids, August 3.

P. McF. Allen, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1894; a member of the American Medical Association; was shot and instantly killed in front of his office in West Nashville, Tenn., by Thomas S. Bush, November 3, aged 37.

James H. Collins, M.D. Faculty of Medicine of Queens University and Royal College of Physicians and Surgeons, Kingston and Toronto University Medical Faculty, 1889; of Chicago; died from pneumonia, at St. Bernard's Hospital, Chicago, November 7.

Albert M. Wheeler, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1883; physician of Houghton County, Mich., 1892; died at his home in Houghton, November 1, from paralysis, after an illness of several months, aged 48.

Richard J. Williams, M.D. College of Physicians and Surgeons, Baltimore, 1892; of Plymouth, Pa.; secretary of the local board of health, died suddenly at New Castle, Pa., November 1, from cerebral hemorrhage, aged 49.

William Russell Swearingen, M.D. University of Louisville (Ky.) Medical Department, 1905; of Naron, Kan., died at the home of his sister in Stafford County, Kan., recently, after an illness of two months, aged 32.

Arthur Jay Bailey, M.D. Northwestern University Medical School, 1907; died at Goldfield, Nev., where he had expected to locate for practice, October 11, from pleuro-pneumonia, after an illness of one week, aged 23.

George A. C. MacIntosh, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1875; a member of the Prince Edward Island Medical Society, died at his home in Murray River, P. E. I., June 23.

Hiram C. Powell, M.D. Eclectic Medical Institute, Cincinnati, 1874; once a member of the Illinois State Board of Health, died at his home in Danville, Ill., November 1, after an illness of several months, aged 67.

Allard Alois A. Graettinger, M.D. Chicago Medical College, 1865; for many years president of the Society of German Physicians of Milwaukee; died at his home in Ontario, Cal., October 23, aged 73.

John C. Robinson, M.D. University of Louisville (Ky.) Medical Department, 1891; a member of the Arkansas and Lee County medical societies, died at his home in Marianna, Ark., July 19, aged 39.

John C. Keeney, M.D. University of Michigan, College of Medicine and Surgery, Ann Arbor, 1875; died at his home at Fayetteville, Ark., October 15, after an invalidism of several years, aged 60.

Jonathan Jason Smith, M.D. Medical School of Harvard University, Boston, 1878; a member of the Massachusetts and Suffolk County medical societies; died at his home in Boston, October 8.

Alexander R. Gebbie, M.D. New York University Medical College, New York City, 1861; died at his home in Lowville, N. Y., October 24, from cancer of the liver, after a long illness, aged 74.

Charles Percy De La Roche, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1856; for many years in the service of the pope, died in Rome, Italy, March 12, aged 72.

Arthur Dudley Yoho, M.D. Medical Department, University of Nashville, Tenn., 1905; died at his home in Hundred W. Va., October 18, from nephritis, after an illness of several weeks, aged 34.

Jeannette Reid Durkee, M.D. New York Medical College and Hospital for Women, New York City, 1890; died at her home in Brooklyn, October 27, after an illness of several weeks, aged 45.

Douglas Schoolfield, M.D. Medical College of Ohio, Medical Department of the University of Cincinnati, 1880; died at his home in Bellevue, Ky., October 23, from cerebral hemorrhage, aged 55.

William C. Connally, M.D. Atlanta (Ga.) Medical College, 1874; a Confederate veteran; died at his home in Dallas, Ga., October 30, from acute gastritis, after an illness of an hour, aged 64.

Sylvester Welsh Beall, M.D. Chicago Homeopathic Medical College, 1889; for forty years a practitioner of Troy, Ohio; died at the home of his son in Columbus, Ohio, October 29, aged 81.

Lewis E. Musick, M.D. American Medical College, St. Louis, 1877; a veteran of the Civil War; postmaster of Mountain Grove, Mo., died at his home, October 28, from asthma, aged 73.

Charles Pleasants Leggett, M.D. New York University Medical College, New York City, 1847; died at his home in Pacific Grove, Cal., October 22, from laryngitis, after a short illness.

Harry H. Coons, M.D. Washington University, Medical Department, St. Louis, 1870; of St. Louis; a veteran of the Civil War, died at the St. Louis City Hospital, August 19, aged 66.

Elijah H. Miller, M.D. Missouri Medical College, St. Louis, 1872; died at his home in Fayetteville, Mo., October 16, from heart disease, after an invalidism of several years, aged 62.

Elijah M. Parks, M.D. Jefferson Medical College, Philadelphia, 1849; for more than thirty-five years a practitioner of Memphis, Tenn., died at his home, October 29, aged 86.

Lucius A. Warren, M.D. University of Maryland School of Medicine, Baltimore, 1868; died suddenly at his home in Lancaster, Pa., from heart disease, October 23, aged 62.

Jesse D. Bright Blocher, M.D. Medical College of Ohio, Medical Department of the University of Cincinnati, 1868; died at his home in Blocher, Ind., October 3, aged 61.

John T. Chalmers, M.D. Physio-Medical College of Cincinnati, 1867; of Ottawa, Kan., died suddenly at his home, November 2, from cerebral hemorrhage, aged 65.

Cloudsley Herbert Brereton, M.D. Trinity Medical College, Toronto, 1896; of Chesley, Ont., died at the home of his father in Schomberg, Ont., September 17, aged 34.

Benjamin Franklin Dake, M.D. Western Homeopathic Medical College, Cleveland, Ohio, 1862; of Pasadena, Cal., died in Ocean Park, Cal., September 24, aged 76.

George E. Daniel, M.D. Chattanooga (Tenn.) Medical College, 1892; of Winder, Ga., died in Lawrenceville, Ga., October 20, after an illness of several months.

John Miller Langhorne, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1848; died at his home in Uniontown, Ala., October 13, aged 89.

Alvin E. Smith, M.D. Kentucky School of Medicine, Louisville, 1884; of Okeene, Okla., died in Alva, Okla., October 23, after an illness of two weeks, aged 46.

Adam Sisler, M.D. Western Reserve University, Medical College, Cleveland, 1853; died at his home in Manchester, Ohio, October 24, from pneumonia, aged 84.

Philip Dinsmore, M.D. Baltimore University School of Medicine, 1887; died at his home in Deep Valley, Pa., in August, from toadstool poisoning, aged 53.

Hugh M. Logan, M.D. College of Physicians and Surgeons, Baltimore, 1879; died October 24, at his home in Rileyville, Va., after a long illness, aged 49.

Pleasant Winston Mendenhall, M.D. Rush Medical College, Chicago, 1873; died at his home in Jasonville, Ind., October 23, after a short illness, aged 65.

Charles M. Purdy (Examination N. Y.), for many years a practitioner of Chenango County, N. Y., died at his home near Norwich, October 13, aged 83.

John Patrick Conway, M.D. Jefferson Medical College, Philadelphia, 1897; of West Philadelphia; died from heart disease, in Kobe, Japan, October 23.

M. C. Burkett (License, Arkansas), 1903, an eclectic practitioner of Little Rock, Ark., died at the City Hospital in that city, October 31, aged 52.

Joseph Le Duc, M.D. Medical Department of Victoria College, Toronto, 1881; died suddenly from uremia, at his home in Dorienville, Quebec.

Ernest Tanner, M.D., for forty-two years a practitioner of Baltimore; died at his home in that city, October 22, from paralysis, aged 67.

William Marvyn Brownlee Boon, M.D. Jefferson Medical College, Philadelphia, 1896; died at his home in Chetopa, Kan., July 24, aged 34.

Charles Holmes Gillies, M.D. Medico-Chirurgical College of Philadelphia, 1900; died at his home in New York City, October 14, aged 29.

B. Sauls, M.D. Medical Department of the University of Louisville, 1873; died at his home in Saulsbury, Tenn., October 29, aged 54.

James McMullen, M.D. Jefferson Medical College, Philadelphia, 1855; died at his home in Mechanicsburg, Pa., October 18, aged 83.

William Martin Lawlor, M.D. Albany (N. Y.) Medical College, 1867; died at his home in San Francisco, October 21, aged 62.

William L. Palmer, M.D. Jefferson Medical College, Philadelphia, 1884; died at his home in Philadelphia, October 30, aged 55.

B. M. Pate (Examination I. T.) of Checotah, I. T., died in Fort Smith, Ark., October 25, it is said, from alcoholism, aged 45.

Thomas J. Reid, M.D. Medical College of Virginia, Richmond, 1861; formerly of Chicago; died at Niles, Ill., October 30.

Society Proceedings

COMING MEETINGS.

Southern Surgical and Gyn. Assn., New Orleans, Dec. 17-19.
American Association of Anatomists, Chicago, Dec. 26-27.
Western Surgical and Gyn. Assn., St. Louis, Mo., Dec. 30-31.

NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS.

Seventh Annual Meeting, held at Richmond, Va., Oct. 24, 1907.

Addresses of Welcome.

The meeting was opened with short addresses of welcome by Governor Swanson of Virginia, by Mayor McCarthy of Richmond, and by Dr. Ennion G. Williams on behalf of the medical profession of Richmond. Responses were made for the association by Dr. Everett Flood, Palmer, Mass., and Dr. Spratling, Sonyea, N. Y.

Officers Elected.

President, Dr. H. M. Weeks, N. J. State Village for Epileptics, Skillman, N. J.; first vice-president, Dr. W. F. Drewry, Petersburg, Va.; second vice-president, Dr. Thomas C. Fitzsimmons, Wilkes-Barre, Pa.; secretary and treasurer, Dr. J. F. Munson, Sonyea, N. Y.

Reports were read from several states in which there are institutions: Ohio, New York, New Jersey, Massachusetts, Indiana, Pennsylvania and the Province of Ontario, Canada.

Epilepsy; Its Definition and Treatment.

DR. J. S. DEJARNETTE, Staunton, Va., gave the following definition of epilepsy, formulated by Dr. J. W. Freed of Staunton and himself: "Epilepsy is a chronic disease, characterized by sudden, occasional, recurring and involuntary discharges, usually short in duration, from a diseased cerebral cortex; always with psychical disturbance, frequently with convulsions, excluding the diseases paresis, meningitis, and short attacks of mania. The tendency is always towards dementia." He believes that heredity is much more important than generally considered because epilepsy is concealed or undetected in many cases. He emphasized the impulsiveness and irritability of the epileptic. He advocated bromid of potassium most strongly. Chloretone has been successful in some cases. He recommended colony treatment highly because of the control which it is possible to have over the patient.

Alcohol As a Primary and Exciting Cause of Epilepsy.

DR. THOMAS C. FITZSIMMONS, Wilkes-Barre, Pa., said that alcohol is dangerous as a cause of epilepsy, not only to the drinker himself, but to his posterity. Especial stress is laid on the influence of alcohol on conception. The product of conception where one parent—or both—is under the influence of alcohol at the time, is especially prone to the disease.

Value of Elimination in the Treatment of Epilepsy.

DR. J. ALLISON HODGES, Richmond, Va., believes that faulty chemical processes play an important and conspicuous rôle in the disease; that a hypertoxic condition with inadequate elimination is the underlying basis of the disease. "Clean out, clean up, and keep clean" expresses his idea of the treatment of epilepsy. He reports three cases, in all of which there was an undue proportion of indican and a deficient secretion of urea in the renal secretion. Small doses of strontium bromid were given and dechloridation was secured. General methods for stimulating elimination were employed. The seizures were notably decreased in each case and the general health markedly improved. In one case there has been up to this time (one year) no return of the epileptic seizures. The continued improvement for the lapse of a year argues well for the future.

Pulmonary Edema as a Complication of the Epileptic Seizure.

DR. W. T. SHANAHAN, Sonyea, N. Y., said that pulmonary edema is a frequent and serious complication of grand mal seizures and status. The cause is probably an enfeebled action of the heart. The treatment is the adoption of a posture to aid in draining the respiratory passages, dry cupping, and the use of atropin and strychnin hypodermically, with venesection in full-blooded patients.

Surgical Intervention in the Treatment of Epilepsy.

DR. STUART MCGUIRE, Richmond, Va., said that the term "epilepsy" is at present too broad to permit outlining a definite line of intervention. He advised removal of the sources of peripheral irritation as the first step in the surgical treatment. Direct interference with the brain should be avoided unless there are localizing symptoms.

DR. MATTHEW WOODS, Philadelphia, pointed out the possibility that at times the mere incidents and concomitants of operative procedure, such as disturbance of vasomotor equilibrium, may cause cure, rather than the removal of tumors or cicatrices. His article will appear in THE JOURNAL.

Other Papers and Presentation of Cases.

DR. D. D. WILCOX, Petersburg, Va., read a paper on "Eye Defects in Epilepsy."

DR. J. F. MUNSON, Sonyea, N. Y., discussed "The Heart's Action Preceding the Epileptic Seizure." His paper will appear in THE JOURNAL.

DR. WHARTON SINKLER, Philadelphia, presented a case of epilepsy of the family type.

The committee on the prize essay reported that no award would be made, but that honorable mention should be accorded to Dr. E. E. Southard of the Department of Pathology of Harvard University.

Public Care of Epileptics.

It was the sense of the meeting that every effort should be used to bring about the public care of epileptics in states where no effort is being made at present, and that the facilities in states already having institutions should be greatly increased. This is necessary, not alone because the epileptic is dangerous to himself and to the public at large, but also because under proper regulation of life and habits his condition can be greatly improved. The lot of an epileptic outside of an institution is at best a hard one. He is an object of curiosity, of scorn, of

pity. No one will employ him; there is no place for him. In the properly constructed institution he finds a place in life where he can work to the best advantage and have all the social privileges he is capable of enjoying, together with the best medical care.

IDAHO STATE MEDICAL ASSOCIATION.

Fifteenth Annual Meeting, held at Boise, Oct. 3-4, 1907.

The President, DR. L. P. MCCALLA, Boise, in the Chair.

Officers Elected.

The following officers were elected: President, Dr. E. W. Kleinman, Hailey; vice-president, Dr. J. C. Woodward, Fayette; secretary-treasurer, Dr. E. E. Maxey, Boise; chairman committee of arrangements, Dr. W. B. Lyman, Boise; chairman committee on legislation, Dr. Hugh France, Wardner; chairman committee on public health and medical charities, Dr. J. L. Stewart, Boise; chairman committee on nominations, Dr. R. L. Nourse, Boise. Dr. Ludvig Hektoen of Chicago, Dr. J. C. Bloodgood of Baltimore, and Dr. H. D. Niles of Salt Lake City were elected to honorary membership. Boise was selected as the meeting place for 1908.

On motion, the secretary was authorized to name the delegate and his alternate to the annual session of the American Medical Association, it being understood that he will endeavor to name some one who expects to attend.

Report of the Secretary.

The secretary, Dr. E. E. Maxey, Boise, in his report stated that there is a movement on foot to arrange for a joint meeting of the medical societies of Washington, Oregon and Idaho, at Seattle in 1909, during the Alaska, Yukon and Pacific exhibition. Attention was also directed to the action of the American Medical Association in referring the matter of branch associations to the state societies. Reports from the various component societies were then given, as well as a report of the receipts and expenditures for the past year.

Following the election of a number of new members it was moved that the association favor the organization of branch associations by the American Medical Association. Motion carried.

Medical Legislation.

The Committee on Medical Legislation submitted an extensive report considering the matters referred to it under four heads, viz.: (1) Amendments and changes in medical practice acts; (2) the osteopathic practice act; (3) the state board of health act; (4) an act to regulate the manufacture and sale of "patent" and proprietary medicines. Under the first head were considered the two amendments to the medical practice act proposed at the last session of the legislature which were intended to weaken the power of the board. One, by giving a rejected applicant the right to appeal "to the medical faculty of any university having a medical college in good standing" for a review of the rating of the board. The second amendment authorized the board to license, without examination, all applicants presenting a diploma and evidence of five years' practice. Through the efforts of the physicians of the state both measures were defeated.

Regarding the osteopathic practice act, the committee reported that it did not consider it advisable to make a determined fight against this measure for fear of jeopardizing other legislation. Most of the time and efforts of the committee were devoted to securing the passage of the state board of health act, which was similar to the measures introduced in the legislatures of 1903 and 1905, which failed to pass owing to political opposition. The law adopted, while not ideal, is far better than any previous legislation along this line.

A bill to regulate the manufacture and sale of "patent" and proprietary medicines, similar to the bill advocated by the *Ladies' Home Journal*, was introduced and passed by the house, but defeated in the senate. The committee, in its report, states that it was plainly to be seen that the opposition was the work of the Proprietary Medicine Association. The committee emphasized the need of organization and of practical experience in order to succeed in legislation.

Education of the Physician.

DR. L. P. MCCALLA, Boise, in his presidential address, discussed the education of the present-day physician and his moral, scientific and commercial status. Dr. McCalla took up and considered the questions of preliminary education, character of medical schools, commercialism in medicine, advantages of membership in medical societies, reciprocity, lodge practice, life insurance fees, the "patent medicine" question, advertising in lay and professional journals, the attitude of the profession regarding "patent medicines" and quacks, the low moral standing of the public press, as well as the assistance which it gives charlatans, quacks and imposters. As a remedy for most of these evils he advised that the profession support the medical laws and examining boards in every possible effort to raise the standard of medical education; and, second, that the public be educated and enlightened regarding the real condition of affairs.

Fourth of July Injuries and Their Treatment.

DR. GEORGE COLLISTER, Boise, thought that it has been definitely proved that infection following these injuries is not due to any infecting material contained in the noise-making articles, but rather that it is due to the dirt and grime always found on the hands of "Young America." The explosion being at short range, more or less wadding of the cap or other article is forcibly carried deep into the tissues, carrying with it the infecting material commonly found on the skin of a boy's hand. In the treatment he advocated free incision of the wound, thorough cleansing, and loose packing of the wound with gauze for drainage and to prevent rapid closure. He also advised administration of antitetanic serum at the earliest time possible, in all cases in which the development of tetanus may be feared.

DISCUSSION.

DR. W. H. TUKEY, Boise, stated his belief that the reason why tetanus follows this class of injuries far oftener than bullet wounds received on the field of battle, is that not only is a better grade of powder used in the latter instance, but the high velocity of a bullet from a modern gun and the distance traveled is thought to render the bullet aseptic. Then, too, the modern bullet usually makes a through and through wound which is more easily drained.

DR. E. F. ROOT, Salt Lake City, said that he approved of the surgical treatment outlined by Dr. Collister, but he puts antitoxin first in the treatment of all these cases where there is the least suspicion of tetanic infection. Next to the serum in importance, he placed incision and perfect drainage.

DR. F. H. BRANDT, Boise, emphasized the necessity of using the serum as early as possible, and said that it is often necessary to inject the serum directly into the spinal canal, the dural cavity, and the large nerve trunks. He also mentioned the use of hydrogen peroxid in cleansing the wound.

DR. WILLIAM R. M. KELLOGG, Seattle, advocated, in the treatment of the wound, that all contused tissues be removed and the parts put up in a copious moist dressing, in addition to the use of serum.

DR. LUDVIG HEKTOEN, Chicago, said that it must be remembered that the infection in these cases is purely local at first, consequently opsonins will never play an important rôle in this subject. Antitoxin should be used early, and, in Chicago, it has been found very important to open the wound thoroughly. He called attention to the experimental work of Dr. Wells of Rush Medical College, who has been unable to discover the tetanus bacillus in any of the materials used in the manufacture of Fourth of July explosives. The infection is thought to be contained in the dirt on the hands of those injured.

Therapeutic Application of Bacterial Vaccine.

DR. WILLIAM R. M. KELLOGG, Seattle, in his paper, said that after an experience dating from December, 1905, he believed that the opsonic index as determined by Wright is of distinct value in the administration of bacterial vaccines, and repeated observations have been, in his experience, entirely consistent. Glandular tuberculosis has entirely disappeared under this treatment, though glands which have persisted for some time

are apt to be caseous and not affected by TR vaccinations. Six patients with tuberculous peritonitis showed marked gain in weight and progressive improvement. Tuberculosis of bones and joints showed improvement, but less marked than in glands, serous membranes, and subcutaneous tissues. In cases of mixed infection treatment with autogenous vaccines gave pronounced amelioration of symptoms. Autogenous vaccinations in two cases of endocarditis produced lowering of temperature and pulse, though both cases were fatal. A patient with spinal meningitis recovered after three vaccinations with *Diplococcus intracellularis meningitidis* prepared from germs isolated from the patient's spinal canal. He opposed indiscriminate use of stock bacterial vaccines, and declared the opsonic index a necessary guide to their use. In pulmonary tuberculosis the opsonic index is of little assistance, depending more on changes in the patient's physical condition. He gives small doses, 1/1500 milligram, at intervals of from ten to twenty days, and has seen most striking improvement in early cases, in young persons, but, of course, hygienic treatment should be combined with the specific treatment.

DR. JOS. C. BLOODGOOD, Baltimore, stated that there is always a time in the history of any disease when proper treatment will effect a cure. He spoke at length on the importance of making a correct diagnosis and emphasized the fact that treatment should not be begun until a diagnosis is made. He referred to the danger of relieving pain in any abdominal condition before making a diagnosis and stated that this is particularly true in acute abdominal lesions. He spoke of the necessity of thorough preliminary training for the physician, and stated that in addition to this the physician must keep abreast of the times by postgraduate study and continuous reading. All medical men, he stated, should not only read the best journals published in English, but should be able to read other languages, particularly German. Lack of time, he declared, is no excuse for not reading. Physicians should attend the meetings of medical societies, and clinical societies in particular, he asserted, give practical postgraduate work. He advised physicians and surgeons to keep careful record of all cases, as when these are properly prepared and filed they constitute a constantly increasing source of information and help. He advised physicians to visit the autopsy room in preference to surgical clinics and said that effort should be made to impress the laity with the importance of postmortem examinations. He said that operations and experiments on animals and the establishment of animal hospitals give the practical experience and technical training which enables medical men to devise new methods and to improve the old. In abdominal cases, it should not be forgotten, he stated, that a large percentage of these patients are neurotic and that in treating such patients surgery is finding its limitations. Psychology, he stated, should be an important feature in the treatment of such cases. He described in detail the technic of the examination of the patient in acute conditions of the abdomen, and laid emphasis on the fact that the patient should be in a comfortable position on the back for some time before attempting to make the examination. The character of the respiration and what one can feel with one's hands on the abdomen are the most important sources of information in these conditions. He laid emphasis on the necessity for exceeding gentleness, as the patient may become frightened and retract the abdominal muscles. He also referred to the various pathologic abdominal conditions and the indications for operation in each.

DISCUSSION.

DR. HARRY D. NILES, Salt Lake City, said that he was most impressed by what was said concerning the education of physicians. There are three things in the way of postgraduate work which should be utilized to gain knowledge and experience: (1) Membership in active medical societies; (2) keeping in touch with one or more modern hospitals; (3) animal work. Autopsies should be performed in every case possible, and physicians should try to secure laws that will favor vivisection and dissections.

DR. CONRAD N. SUTTNER, Walla Walla, Wash., spoke at length of the difficulties of doing experimental work in the smaller towns, and recited some of his experiences along this line.

DR. ROBERT L. GILLESPIE, Portland, Ore., said that as he is an alienist he was glad to hear Dr. Bloodgood speak of the type of abdominal pain due to neurosis, and said that physicians should give more special study to human nature and make freer use of suggestion for their neurotic patients.

DR. A. E. PIERCE emphasized the importance of thorough examination of patients. He said also that he had been using suggestion for some time and found it of material benefit, even in cases in which a definite lesion was present; it encourages the patient. The physician must first win the patient's confidence, then he can tell him what to do and insist on his doing it. In Portland there is a society or club, limited to twelve members, all specialists, which meets regularly for study and mutual benefit, and if a member does not attend or fails to discuss the subject of the evening, he is fined.

DR. GUY S. PETERKIN, Seattle, said that in the West physicians have the same difficulties to contend with in the matter of doing autopsies and dissections. There is a physicians' club in Seattle, composed of a few men of diversified views and specialties. In holding an autopsy or studying any particular case or condition, each member discusses the subject from his own particular viewpoint, and this has been found to be a very effective method of study and a means of getting considerable relief from the obstructions thrown in the way of animal experiments and dissections.

DR. E. F. ROOT, Salt Lake City, said that there should be no difference between the methods of the physician and those of the surgeon in seeking to arrive at a diagnosis. Every means should be used to get at a correct diagnosis. This is the time for consultation and the utilization of all known methods of precision. Physicians and surgeons are prone to try to do too much. It is better to treat fewer patients and do it well than a great number not so thoroughly. He emphasized the importance of pain in diagnosis of acute abdominal lesions. There is a pain which comes from a neurosis, that may be just as acute and real as when an active inflammation exists. In such cases physicians must show their ability as diagnosticians, and be able to know and advise the proper treatment, for to operate in such cases would be a mistake.

DR. FRANCIS M. POTTENGER, Los Angeles, said that the important points in this address are: First, a correct diagnosis; second, the institution of intelligent treatment. Physicians do not examine their patients thoroughly enough. Ample time should be taken for each case, and the utmost care should be used in history taking and in studying the symptoms and laboratory findings. Physicians should read more and see more of the work of others. There is no place in medicine for symptom treatment. Do nothing rather than give morphin.

DR. JOSEPH C. BLOODGOOD said that he appreciated the compliment shown him by the liberal discussion of his address, and that he had derived no little benefit therefrom. He has always found it true that the person who prepares a paper derives more benefit from it than those who hear it read or read it later. Self education is the point with which he desired to impress the society most. He thinks it not at all impossible for any of those present to do animal work. In Baltimore there is a dog hospital, for the treatment of dogs and other domestic animals, and a position on the staff of this hospital is found to be of great help to surgeons and physicians. He thinks it the duty of the medical profession to educate the public to the need for autopsies. In making autopsies they should be done carefully and slowly, and several other physicians should be present.

(To be continued.)

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Annual Meeting, held in Reading, Sept. 23-26, 1907.

(Concluded from page 1625.)

Treatment of Compound Fractures by Clamps.

DR. J. C. BIDDLE, Fountain Springs, exhibited a clamp which he has been using with very satisfactory results.

DISCUSSION ON PAPERS BY DRS. WILSON, DAVIS AND BIDDLE.

DR. DEFOREST WILLARD, Philadelphia, stated his belief that wires or screws are much better than clamps for fastening the

ends of bones together, and in addition are not so liable to be displaced by the movements of the patient or to produce necrosis.

DR. WILLIAM L. ESTES, South Bethlehem, declared that the greatest argument against Dr. Biddle's clamp is the necrosis it would produce, as even the small steel or nickle-plated plates he has been using for some years occasionally produce this effect.

DR. JOHN H. JOPSON, Philadelphia, referred to the case of a colored boy who was admitted to the hospital, supposed to be suffering from typhoid fever, but who later developed a rigidity of the cervical spine and a large abscess. This was opened, and the boy was apparently convalescent, but later developed meningitis and died.

DR. H. AUGUSTUS WILSON, Philadelphia, emphasized the importance of the orthopedic surgeon having a thorough knowledge of pathology, surgery and the other branches of medicine.

DR. GWILYM G. DAVIS, Philadelphia, remarked that the history of the cases would aid materially in making the diagnosis in cases of infectious spine disease.

DR. J. C. BIDDLE, Fountain Springs, stated that he has seen no instances in which the clamp failed to keep the bones in perfect apposition, nor has he ever had any difficulty with them producing necrosis.

Treatment of Acute Inflammations of the Pelvic Organs.

DR. F. HURST MAIER, Philadelphia, divided the cases into two classes, puerperal and non-puerperal. He called attention to the danger of resorting to radical measures in the acute stages, and emphasized the value of the Murphy treatment with drainage *per vaginam* in these cases, believing that the effort should be directed particularly to increasing the resisting power of the patient and destroying the virulence of the infection.

Treatment of Pelvic Abscess.

DR. FRANK C. HAMMOND, Philadelphia, stated first that the abscess demands early evacuation and drainage, which he believes can be best secured by the vaginal route, among the advantages being less complicated and more rapid recovery; drainage is more natural, and this method prevents ventral hernia. He gave in detail the various steps of the operation and cited a number of illustrative cases.

Ovarian Tumors Complicating Pregnancy and the Puerperium.

DR. WILMER KRUSEN, Philadelphia, gave detailed reports of a number of cases. He urged the value of a blood examination in all cases of marked anemia, and discussed the questions of sterility and ovarian tumors.

Treatment of Eclampsia.

DR. JOHN C. APPLEGATE, Philadelphia, stated that prophylaxis is of great importance. Treatment is based on the theory of toxemia, with certain predisposing and contributing factors. Stimulating diuretics should not be used until after readjustment of the kidney substance. He considered the time and manner of emptying the uterus and reported the facts gathered from a study of 38 cases in private and hospital practice.

Treatment of Dysmenorrhea by Forcible Dilatation and the Application of the Wylie Drain.

DR. HENRY D. BEYEA, Philadelphia, reported a number of cases in which this method had afforded relief, in some of which the pain was so severe as to require rest in bed. Following the use of this method the patients were relieved.

DISCUSSION ON PELVIC OPERATIONS.

DR. BROOKE N. ANSPACH, Philadelphia, stated that the acute peritonitis due to gonococcus resembles appendicitis, and that the former is usually amenable to conservative treatment, whereas the latter demands radical measures, and it is important to distinguish between the two. In regard to ovarian cysts complicating pregnancy, he stated that the mortality is much lower in operative than in the non-operative cases.

DR. WILMER KRUSEN, Philadelphia, believes that prompt operation, with as little time consumed in performing it as possible is demanded in ectopic pregnancy, and also recommended stimulation during the anesthesia.

DR. THEODORE A. ERCK, Philadelphia, stated that in cases of ectopic pregnancy operation should be done as soon as proper surgical preparations could be made.

DR. F. HURST MAIER, Philadelphia, thinks that, if, in cases of ectopic pregnancy, early differential diagnosis between tubal abortion and tubal rupture could be made, in the latter class of cases operation should be done early. Even if the conservative treatment is adopted on the other hand it should be sedative rather than stimulative.

DR. HENRY D. BEYEA, Philadelphia, stated that the instrument should be inserted with the most aseptic precautions, and that he had never heard of infection except in one case, which was due entirely to the carelessness of the operator.

CONFERENCE OF SECRETARIES.

This special meeting was called to order by Dr. Theodore B. Appel, after which Dr. John B. Donaldson, Canonsburg, was elected permanent chairman, and Dr. Theodore B. Appel, Lancaster, permanent secretary.

What Can a Secretary Do to Get New Members?

DR. JOHN J. COFFMAN, Scotland, stated that the Franklin County Medical Society eight years ago had 34 members and now has 54, having lost 2 by death and 1 by suspension during the past year, there being 62 eligible physicians in the county. In sending out the programs two pages are printed, one devoted to the program proper and the other to items of interest. He believes that it is well occasionally to hold a meeting at which physicians outside of the county are invited. He believes that the prompt collection of dues increases the interest of the individual members in the society, by making them feel a desire to derive benefit from what they have paid. In this society once a year the names of the members are printed on the folder, and occasionally it is considered advisable to give to the local press a report of the meetings.

The Young Men in the Society; How to Interest Them.

DR. HOWARD C. FRONTZ, Huntingdon, stated that the society should have a committee to look after the young men, to explain to them the advantages of membership and to advise them to make immediate application for membership. They should be made to feel that individual work is a benefit to them, and that it is their duty to take part in the work. They should be urged to read papers on some subjects which they might be allowed to choose. The program committee is an important committee; there should be some interesting subject for discussion at every meeting. The society should meet once a month, and an occasional social feature such as a banquet will very materially increase the attendance.

The Lazy Secretary and His Baneful Effect on the Society.

DR. ERNEST U. BUCKMAN, Wilkes-Barre, stated that the condition of the society depends as much on its individual members as on the secretary or any of its officers. The members have no right to sit down and expect the secretary to do all the work for the society; he should be willing to do his part and to make the members do theirs. The secretary should see that the meetings begin on time. There should always be at least one paper with discussers for each meeting. The program for the year should be made up by the executive committee at the beginning of the year, and the secretary must see that deliquencies are provided against. He should take an active interest in the state society and other medical meetings in the neighborhood, and be wide awake to the interests of the society and do all that is possible for its promotion.

DISCUSSION.

DR. GEORGE H. SIMMONS, Chicago, emphasized the value of these secretaries' meetings, which he stated originated in Pennsylvania and followed in Ohio. He believes that the secretary is the most important officer of the county society. He recommended that the program be made up a year ahead in order to give the members time to prepare the subjects, and if a portion of a subject is given to a member, insist on his keeping to that portion. Young men should be encouraged to

read papers. Clinical reports, he said, are of great value and should be presented and discussed. Monthly meetings are essential to the success of the society and public meetings once a year, to which lawyers, school teachers, etc., are invited, are also of value. Reports of these meetings should be given to the local papers, and the reports of the regular monthly meetings should be sent to the journal of the state society, and if the names of the members present can be published, it will serve to stimulate the other members. The by-laws should be so worded that if a member fails to pay his dues, he will be dropped without any action on the part of either the secretary or the society.

DR. GEORGE W. WAGONER, Johnstown, stated that the public at large does not understand the medical profession, and that it is the duty of the county societies, and especially the county secretaries, to correct this opinion. He stated that the public considers that the medical profession's suggestions for legislation, etc., are for the advancement of physicians. He emphasized the value of public meetings and cited instances in which they had been held in Cambria County, at which such subjects as the medical expert, and the health of school children and the hygiene of the school room were discussed, at which times, in addition to the invitation to the general public, the profession particularly interested, was especially invited and asked to participate. He urged the importance of gaining the friendship and confidence of the public as a prerequisite to any legislation that might be desired.

DR. THOMAS D. DAVIS, Pittsburg, endorsed the public meetings as a method of bringing the public up to the standard of the profession.

DR. HENRY BEATES, JR., Philadelphia, emphasized the need of organization and urged that the programs be arranged so that the fundamental sciences of anatomy, physiology, pathology and chemistry be discussed.

DR. WILLIAM S. ROSS, Altoona, stated that, while he believes the work of the secretary to be important, he should be ever ready and willing to call to his assistance the men about him. Organization he believed to be the watchword to success in medical legislation.

DR. GEORGE W. GUTHRIE, Wilkes-Barre, stated that the Luzerne County Medical Society meets every month; that its dues are $12 a year, and that there are no delinquent members. The editor of one of the city papers being a member of the profession and of the society, the reports of the meetings with the members present are published the following morning, which is a stimulus to the member not present.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Thirty-third Annual Meeting, held at Columbus, Ohio, Oct. 8-10, 1907.

(*Concluded from page 1468.*)

MEDICAL SECTION.

Influence of Medical Men on Human Progress.

DR. GEORGE F. BUTLER, Chicago, in the address on medicine, said that if we are to prevent disease as our chief mission, or as the most effective method of warfare on this chief enemy of human progress, the conditions must be known, not merely the material, mechanical and social from which they result, but the primary conditions that lie still farther back of the immediate conditions that result in diseases. He discussed the relations between the physicians and the public service, and gave considerable attention to that need for a better understanding of the social question and deplored the danger to innocents of silence and secrecy. He advocated the abolition of state lines with reference to medical practice regulations. Referring to expert witnesses in legal cases, he condemned "expert liars" in strong language. In the medical profession, as in religion or science, the perils of dominating influence can not be escaped. While the evils flowing from industrial concentration can be met, the evils that must follow the syndication of intelligence can not be avoided. The struggle of the ages has been the emancipation of truth from authority.

The Relations Between the Medical Profession and the People.

PRESIDENT H. H. GRANT said that we all realize that the world is full of wretchedness, deformity and disease; that this is due to ignorance and cupidity, distributed well over the whole population from rich to poor. We all realize the measures of relief must be a slow and gradual reform, conducted by a concentration of many influences, wielded by society at large. We all realize the obstacles to success, as well as the possibilities of abuse in the methods, and we all know the need of a directing influence which is thoroughly informed and can be confidently entrusted with power. It is his belief that through the trust and the support of the general public, given to a conscientious medical profession, disinterested as a body, with identical concerns with the public, a highly comforting progress will be soon recorded. With a view to the hopeful advance of these noble and world-rewarding benefactions, let the profession of medicine, without jealousy or thought of self-interest, devote its wisest and most faithful workers as chieftains; let the lay and the religious press, ever ready on conviction as earnest and determined associates, with unremitting zeal, uphold and champion the cause, and add to this the patient and never-failing confidence of a liberal and trusting general public rallying its invincible support, and there shall open up before the coming generation such a prospect of achievement and victory as will be a soul-satisfying record.

Neurasthenia Gastrica.

DR. CLEMENT R. JONES, Pittsburg, reported four cases and concluded that neurasthenia gastrica or nervous dyspepsia is frequently due to or complicated by eye-strain. Other gastric disturbances are sometimes aggravated by eye-strain. When eye-strain is the cause of gastric symptoms, the relief by proper refraction is prompt and satisfactory.

DISCUSSION.

DR. R. D. CLIPPINGER believes that eye-strain often produces all the symptoms of an old so-called chronic gastritis. The general practitioner is apt to ignore the eyes.

DR. MARK D. STEVENSON finds that very many patients are relieved of nausea and vomiting by the wearing of proper lenses.

DR. GEO. P. SPRAGUE said that so-called gastric disturbances in neurasthenia are very often round-about reflex disturbances due to vertigo; in one case a lack of equilibrium due to a visual defect; in some other case not. He finds very commonly in sending neurasthenics to oculists for the correction of eye-strain that until the attention of the oculist is called to the possible psychic connection between the patient's condition and the visual defect he very often fails to give the correction, which he can and does do after that has been called to his attention.

Reinfection with Syphilis.

DR. A. U. WILLIAMS, Hot Springs, has seen a number of cases in which he has suspected reinfection. In many the history of the first attack was indefinite and unreliable. In but very few cases was the history sufficiently plain to make anything like a positive diagnosis of a second attack. He cited two cases in which the symptoms and history are so plain that he thinks he can safely claim both as cases of reinfection.

Toxemia from the Standpoint of Perverted Metabolism.

DR. RALPH W. WEBSTER, Chicago, concluded that toxemia, aside from that following the acute or chronic bacterial processes, is always of metabolic origin. The toxemias under discussion are more the effects of a general metabolic perversion than of a direct organic disorder. A specific toxemia, in the sense that it is due to a specific substance, is unknown in the class of toxemias treated.

DR. THOMAS HUNT STUCKY, Louisville, followed with a paper on autointoxications of intestinal origin resembling typhoid fever.

The Treatment of Scarlet Fever as a Streptococcus Disease.

DR. J. E. COLEMAN, Canton, Ill., has treated this disease with carbolic acid, internally and externally, together with

small doses of aconite the first few hours until fever is allayed. In all of the cases he has thus treated, the disease was materially shortened, the rash rapidly fading, and on the second day the fever was gone, and the throat symptoms were also relieved. When this treatment was used there was not any desquamation of the skin, nor any after-effects from the disease, such as nephritis, or discharge from the ear. He has successfully treated cases of scarlet fever by the application of the two remedies mentioned since the time of an epidemic of the disease, year after year, admitting that the results he has obtained may possibly have been due to the fact that the disease ran a benign course.

Relations of the Doctor to the Alcoholic Problem.

DR. T. D. CROTHERS, Hartford, Conn., showed the intimate associations of alcohol with a large part of the mortality, disease and degeneration of the present time, and urged the profession to take up the physical study of the subject. He showed that the mortality from alcohol, both direct and indirect, was from 10 to 20 per cent. of all deaths, and at least 10 per cent. of all diseases are very largely influenced and due to this cause, also that from 20 to 50 per cent. of all mental diseases and 50 per cent. of idiocy, pauperism and other degenerative conditions have an alcoholic causation. Fifty per cent. of all criminals serving sentences for crime in 1906 were due to the influence of alcohol. Nearly half a million persons came under legal recognition for intoxication and petty crime last year. Reliable authorities show that 50 per cent. of all railroad and other accidents are due to the mistakes of persons under the influence of spirits. Beyond this the losses, revolutions and injuries noted in every community assume great proportions. This problem is a physical and medical one. Every advance of science shows that there are physical causes which develop from distinct sources which can be studied and known, and that the whole subject is not a mass of theories, but one of facts the same as that of epidemic and contagious diseases. The evils have reached such a stage that public opinion is making Herculean efforts along theoretic lines to overcome and break it up. The author urged that it is a medical subject to be understood by medical men. When the facts are studied and known, the remedies and methods of prevention will be clear and practical. The failure of physicians to know the subject has brought in an army of gold cures and quacks whose presence is a reflection on the intelligence of the physicians who understand and treat these people. The great temperance movement should be directed and managed by physicians along exact lines of scientific study above all prejudice; then they will become practical and reach to the bottom of the great drink problem and point out the methods of cure and prevention. When medical men are taught to recognize the physical side of this problem and study the facts alone, irrespective of all theories, then the mortality and disease will disappear.

The Recognition and Management of Acute Mastoiditis by the General Practitioner.

DR. LEARTUS CONNOR, Detroit, drew the following conclusions: 1. Patients with acute mastoiditis should be regarded as seriously ill, placed in bed, given a brisk cathartic, and diaphoretic, and the diet limited to at least one-half. 2. If there be present tenderness of the mastoid, redness and bulging of the inner, upper and posterior external auditory canal, and adjacent membrana tympani, Wilde's internal incision should be promptly done. 3. Regular irrigation with water, as hot as can be endured, should precede and follow the incision, and dry heat follow during the intervals of irrigation. 4. An aseptic should be applied to the wound after each irrigation; a 50 per cent. solution of argyrol on a cotton-tipped probe is convenient and useful. 5. Thus managed, many cases of acute mastoiditis speedily recover. 6. If they grow worse steadily, the mastoid must be promptly opened, all diseased tissues removed, and the wound dressed aseptically. 7. A painful deaf ear merits quite as careful attention as a red painful eye or a painful stiff limb. Until this be accorded it physicians will continue to have crops of extensive destruction of mastoid bones, permanent loss of hearing, infection of lateral sinus, facial paralysis, subdural, cerebral and cerebellar abscess and death.

Morphin Addiction.

DR. GEO. P. SPRAGUE, Lexington, discussed some of the essential points in the etiology, pathology and treatment of morphin addiction. He divided the cases into three groups: (1) A small one composed of normal individuals, who, from unwise treatment for pain in acute illness, have contracted the habit. A second larger group of moral degenerates who indulge in the vice of morphinism, and a third, and much the largest group, recruited from among the neuropathic weaklings, from the victims of improper training and lack of early discipline; from the vast army of defectives, who, beginning to lose ground in the race of life, resort to drugs as a spur, and from the large number, who, suffering from sudden shock of disease, loss, etc., resort to the drug in the hope of obtaining relief.

The patient should be under treatment for months; that he should not be alone a moment when he might procure morphin, day or night; that every one coming in contact with him must be above bribery, and that his nurse must be above suspicion, and ever suspicious. The patient's sense of right and power of will should be steadily stimulated, and every physical ill he may have should be found and vigorously combated.

The Nature of Morphin Disease.

DR. CHARLES W. CARTER, Richmond, Ind., said that the physician who would understandingly and conscientiously treat the morphin disease must have a generous breadth of view in reading human character, an entire want of prejudice in interpreting symptoms, and a broad and thorough knowledge of remedial agents.

Medical Inspection of Public Schools.

DR. FRANK W. GAVIN, Canton, Ohio, said the medical inspector should look after: 1. The school building, its condition, ventilation, lighting, heating, seating, etc. 2. The inspection of candidates for teachers' certificates in the principles of preventive medicine and school hygiene. 3. Physical and mental condition of the child.

He pointed out the advantages of medical inspection and the methods of examination. He believes the salary of a medical inspector should be generous, thus warranting the selection of the best man procurable. He sincerely believes it would be money wisely invested on the part of cities and municipalities.

Urinary Infections in Children.

DR. I. A. ABT, Chicago, pointed out the avenues through which microorganisms gain access to the bladder and to the pelvis of the kidney in these infections. Bacteria may enter the bladder through the urethra, and migrate upward to the bladder and thence to the kidney. The infection may be hematogenous in character, the microorganisms finding access into the bladder through the blood vessels. The microorganisms may pass in some manner from the bowel through the loose cellular tissue of the pelvis into the bladder. The fact that sometimes a bowel infection, particularly follicular enteritis, precedes an attack of cystopyelitis, has suggested this view. Congenital malformation of the bladder and kidney predisposes to cystitis and pyelitis. Such a case has come under his observation. He described the symptoms and course of the disease.

As regards treatment, the ordinary urinary antiseptics in one form or another used internally will usually bring about the desired result. In the severe forms of streptococcus or staphylococcus infection the vesical irrigation may be indicated. In other respects the treatment is purely expectant and symptomatic. The pain and restlessness may require the use of antispasmodics and sedatives.

The following papers were also read:

"The Profession of Medicine as It Was and as It Is," by Dr. Robert Barclay, Pittsburg, Pa.; "Purulent Conjunctivitis in Infants and Adults," by Dr. Mark D. Stevenson, Akron, Ohio; "Gelseminin," by Dr. W. F. Waugh, Chicago; "Colorado and the Eastern Pulmonary Case," by Dr. W. A. Campbell, Colorado Springs, Colo.; "Pregnancy When Complicated by Tuberculosis," by Dr. Harold A. Miller, Pittsburg, Pa.; "The General Practitioner's Attitude Toward Eyestrain," by Dr. Richard D. Clippinger, Bellefontaine, Ohio; "Gallstones as an Etiologic Factor in Diabetes," by Dr. J. C. O'Day, Oil City, Pa.; "A Résumé of Gallstone Factors," by Dr. R. Alexander Bate, Louisville, Ky.; "The Psychasthenic States," by Dr. Charles W. Hitchcock, Detroit; "What We Learn from Analysis of the Feces," by Dr. Joseph A. Sweeney, Louisville, Ky.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

MISSOURI State Board of Health, Southern Hotel, St. Louis, November 19-21. Secretary, Dr. J. A. B. Adcock, Warrensburg.

FLORIDA (Regular) Board of Medical Examiners, Jacksonville, November 20-21. Secretary, Dr. J. D. Fernandez, Jacksonville.

CALIFORNIA Board of Medical Examiners, Los Angeles, December 3. Associate Secretary, Dr. F. Dudley Tait, 1879 Sutter St., San Francisco.

MARYLAND Homeopathic Board of Medical Examiners, Baltimore, December 3. Secretary, Dr. Joseph S. Garrison, 484 W. North Ave., Baltimore.

PENNSYLVANIA Boards of Medical Examiners, Philadelphia, December 3-6. Application for examination should be made to Dr. N. C. Schaeffer, Secretary of the Medical Council, Harrisburg.

DELAWARE State Medical Examining Board, Dover, December 10, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

OKLAHOMA State Board of Medical Examiners, Guthrie, December 10-11. Secretary, Dr. J. W. Baker, Enid.

OHIO Board of Medical Registration and Examination, Columbus, December 10-12. Secretary, Dr. George H. Matson, State House, Columbus.

IOWA State Board of Medical Examiners, Capitol Building, December 10-12. Secretary, Dr. Louis A. Thomas, Des Moines.

MARYLAND Board of Medical Examiners, 847 N. Eutaw St., Baltimore, December 10-13. Secretary, Dr. J. McP. Scott, 129 W. Washington St., Hagerstown.

VIRGINIA Medical Examining Board, Staunton, December 10-13. Secretary, Dr. R. S. Martin, Stuart.

KENTUCKY State Board of Health, Louisville, December 17. Secretary, Dr. J. N. McCormack, Bowling Green.

Reciprocity Severed Between Kansas and Missouri.—It is learned that reciprocal relations have recently been severed between the examining boards of Kansas and Missouri, although it is probably due to the readjustments in medical standards taking place in these states. The Missouri board has just begun working under the new practice act which has established higher standards of preliminary and medical education, while the Kansas board has just been reorganized and there is the prospect of a careful administration of the duties devolving on that body. It is to be hoped that reciprocity will not long be discontinued between these states, since both boards are apparently interested in the proper enforcement of fair rquirements for medical licensure.

Medical Education in Argentine Republic.—The faculty of medical science of the National University at Buenos Aires has passed a resolution extending the length of the medical course to seven years, to become effective after March 1, 1908. The work of the first three years includes courses in botany, zoology, descriptive anatomy, chemistry, histology, physics, biologic chemistry, physiology and bacteriology. The last two years consist almost entirely of clinical work.

Value of a Training in Arts and Sciences.—In the discussion of preliminary education the following, from President Schurman's last annual report to the trustees of Cornell University, will be of interest:

"A college training in arts and sciences, when it is not baulked of its legitimate fruits, gives a man a range of ideas a habit of reflection and reasoning, a training and mastery of faculties which, as it were, brings him into full and energetic possession of himself and all his powers. Deprived of this training, a student of law or medicine, unless he be exceptionally endowed and self-educated, is not at home among the sciences which constitute the curriculum and can not derive from them the full advantages they are intended and qualified to yield. Nor, of course, can these sciences be successfully cultivated by him, much less enriched or enlarged. Furthermore, he is pretty certain to be ignorant of literature, history, economics, and the like; to be untrained in logic and speculation; and even to lack the indispensable art of expressing himself easily and correctly either in speech or writing. Such men lower the tone of a so-called learned profession. Nor, except in rare and happy instances, can they ever expect to occupy its higher ranks."

University of Minnesota's Entrance Requirements.—Dr. F. F. Wesbrook, dean of the College of Medicine and Surgery of the University of Minnesota, sends us the following statement in regard to the requirement in physics, chemistry, biology and modern languages:

The faculty of the College of Medicine and Surgery recommended to the board of regents of the University of Minnesota and on Oct. 10, 1907, the board of regents approved of the following recommendation of the College of Medicine and Surgery:

Whereas, the College of Medicine and Surgery now requires two years of college work as a prerequisite for entrance to said college, the faculty desires to require specifically that these two years of college work must include the satisfactory completion of one year of at least three credit hours per week, including laboratory work.* in each of the following named subjects: 1, Physics; 2, general inorganic chemistry; 3, qualitative analysis; 4, biology, i. e., zoology or botany; 5, languages, i. e., German or French.

*Note.—A credit hour is taken to be two or more hours of consecutive laboratory work.

North Dakota October Report.—Dr. H. M. Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, Oct. 1-3, 1907. The number of subjects examined in was 14; percentage required to pas, 75. The total number of candidates examined was 12, of whom 11 passed and one failed. Four reciprocal licenses were issued at this examination. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Hahnemann Med. Coll., Chicago	(1907)	79.
Northwestern University	(1869)	75.
College of P. and S., Chicago	(1895)	77.
Michigan Coll. of Med.	(1883)	77.
University of Minnesota	(1906)	86.
University of Minnesota, Homeo. Dept.	(1897)	86.
Creighton Med. Coll.	(1905)	82.
Milwaukee Med. Coll.	(1907)	88.
McGill University, Canada	(1889) 89; (1905)	85.
University of Toronto, Ontario	(1906)	81.

FAILED.		
Bennett Coll. of Ecl. Med. & Surg.	(1907)	70.

LICENSED THROUGH RECIPROCITY. College	Year Grad.	Reciprocity with.
Rush Med. Coll.	(1903)	Illinois.
College of P. & S., Chicago	(1905)	Illinois.
Chicago Coll. of Med. & Surg.	(1907)	Illinois.
University of Iowa	(1907)	Iowa.

California August Report.—Dr. F. Dudley Tait, Associate Secretary of the California State Board of Medical Examiners, reports the written examination held at San Francisco, Aug. 6, 1907. The number of subjects examined in was 9; percentage required to pass, 75. It is reported that two illegally obtained diplomas, one from the College of Physicians and Surgeons of San Francisco, and one from the College of Physicians and Surgeons of Los Angeles, were rejected by the board. The total number of candidates examined was 111, of whom 62 passed, 29 failed and 20 were conditioned. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
College of P. and S., Los Angeles	(1907)	84.6
Cooper Med. Coll. (1907) 76.8, 77.1, 77.2, 78.6, 80.4, 81.4, 82, 82.2, 82.8, 83.4, 83.4, 84.2, 85.1.		
Oakland Coll. of Med. and Surg.	(1907)	80.2, 81.
University of California (1907) 79, 80.1, 82.1, 82.6, 83.6, 84.3, 84.4, 85.2, 85.2, 85.3, 89.3, 89.4, 89.6.		
University of Southern California (1907) 75.2, 76.6, 79.8, 81.7, 81.8, 82.2, 82.3, 82.3, 82.4, 85.5, 86.4, 87.9.		
Hahnemann Med. Coll. of the Pacific	(1907)	75.3, 79.8
George Washington University	(1907)	79.
Rush Med. Coll.	(1894) 82.2, (1903)	77.4, 83.7
Chicago Homeo. Med. Coll.	(1887)	82.2
Northwestern Univ. Med. School	(1896) 77.6, (1907)	79.9
Cornell University	(1907)	82.7
Hahnemann Med. Coll., Philadelphia	(1906)	88.9
Jefferson Med. Coll.	(1894) 75.9, (1907)	83.5, 84.2
Eclectic Med. Inst., Cincinnati	(1907)	82.3
University of Pennsylvania	(1904)	77.2
University of Toronto, Ontario	(1907)	82.9
McGill University, Quebec	(1870)	76.8
Royal College of Physicians and Surgeons, England	(1894)	81.3; (1897) 88.5.
Victoria University, England	(1891)	86.7

FAILED.		
College of P. and S. San Francisco (1906) 69.9, 70.5; (1907) 70.5,		
Cooper Med. College	(1907) 64.7, 71.3, 72.4,	73.7
University of California	(1907)	73.8
University of Southern California	(1906) 73.4, (1907) 70.6,	73.4
Howard University	(1906)	67.6
Bennett Coll. of Ecl. Med. and Surg.	(1905)	74.1
College of P. and S., Chicago	(1893)	60.1
Kentucky School of Medicine	(1898)	61.7
Tulane University of Louisiana	(1899)	61.2
University of Maryland	(1907)	71.2
University of Michigan	(1902)	52.9
College of P. and S., Boston	(1906)	51.4
Detroit Coll. of Med.	(1878)	58.8
University of Missouri	(1897)	67.3
Marion-Sims-Beaumont Med. Coll.	(1897)	70.5
University of Pennsylvania	(1895) 72.8, (1906)	*76.4
Hahnemann Med. Coll., Philadelphia	(1901)	66.9
Jefferson Med. Coll.	(1893) 61.6, (1907) 68.7,	*76.9
Medico-Chirurgical College, Philadelphia	(1905)	70.9

CONDITIONED.

College of P. and S., San Francisco	(1907)
Cooper Med. Coll.	(4, 1907)
University of California	(1907)
University of Southern California	(4, 1907)
University of Denver	(1895)
Northwestern Univ. Med. School	(1907)
College of P. and S., Chicago	(1905)
University of Iowa	(1897)
University of Michigan	(1880) (1890)
University and Bellevue Hosp. Med. Coll.	(1904)
Ec'lectic Med. Institute, Cincinnati	(1907)
Jefferson Med. Coll	(1890) (1907)

* Fell below 60 per cent. in several subjects.

Massachusetts July and September Reports.—Dr. E. B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written examinations held in Boston, July 9-11 and September 10-12, 1907. At both examinations the number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75.

At the examination held July 9-11, 1907, the total number of candidates examined was 133, of whom 90 passed, including 3 non-graduates, and 43 failed, including 16 non-graduates. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Yale University	(1906) 76.8; (1907)	80.6
Johns Hopkins Med. School	(1907)	78.7
Baltimore Med. Coll.	(1905) 75.4; (1907) 75, 76, 76.7,	81.1
Boston University	(1907) 77.7, 79.2,	80.5
College of P. & S., Boston	(1907) 75.2, 75.5, 76.1, 77.1, 78.7,	79.2, 82.2, 82.4.
Tufts Coll. Med. School	(1905) 78.3; (1907) 75, 75.5, 76, 77, 77.2, 77.5, 77.7, 78, 78.2, 78.7, 78.3, 78.6, 79.2, 79.3, 79.3, 79.4,	80.2, 80.5, 81, 81.2, 81.2, 81.6, 82.1, 82.5, 82.8, 83.4, 83.9, 84.7.
Harvard Med. School	(1906) 75.2, 83.8; (1907) 76.2, 77, 78.5, 78.6, 78.7, 79.7, 79.7, 79.9, 80, 80.1, 80.3, 80.5, 80.5, 80.7,	81.5, 81.6, 81.6, 82, 82.1, 82.2, 82.5, 84.4, 84.7, 86.8.
University and Bellevue Hosp. Med. Coll.	(1907)	73.8
Long Island Coll. Hosp.	(1907)	75.
Cornell University	(1905) 84.5; (1907)	80.7
Dartmouth Med. School	(1907)	76.1, 77.6
Woman's Med. Coll. of Pennsylvania	(1907)	82.8
Jefferson Med. Coll.	(1905) 78.8; (1907)	78.4, 80.8
University of Vermont	(1906) 79.2; (1907)	75.3, 80.5

FAILED.		
George Washington Univ.	(1907)	68.5
College of P. & S., Chicago	(1905)	68.7
Kentucky School of Med.	(1906)	63.4
College of P. & S., Baltimore	(1907)	73, 73.7
Baltimore Med. Coll.	(1903) 58; (1905) 65.3, 71.4, 71.5; (1906) 71.9, 72.1; (1907) 69.7.	
Baltimore University	(1906)	67.4
Harvard Med. School	(1907)	71.9
College of P. & S., Boston	(1905) 55.2; (1907)	69.7, 70.5
Tufts Coll. Med. School	(1898) 60.6; (1906) 69; (1907)	68.4, 70.2, 72.5.
Hahnemann Med. Coll., Philadelphia	(1907)	71.7
University of Pennsylvania	(1899)	70
Laval University, Canada	(1901) 66.7; (1905)	57.8
Alexanders University, Finland	(1902)	43.3

At the examination held Sept. 10-12, 1907, the total number of candidates examined was 46, of whom 30 passed, including one non-graduate, and 16 failed, including 2 non-graduates. Two candidates took an incomplete examination. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Yale University	(1906)	80.7
George Washington Univ.	(1907)	75.6
Medical School of Maine	(1906)	75.
Johns Hopkins Med. School	(1906)	84.6
College of P. & S., Baltimore	(1907) 75.5,	77.2, 78.7
Baltimore Med. Coll.	(1907) 75.1,	75.4, 76.9
Tufts Coll. Med. School	(1906) 75.2; (1907)	75.
Harvard Med. School	(1907) 75.2, 75.5, 77, 77.8,	77.9, 79.2
Boston University	(1906)	80.6
Cornell University	(1907)	80.5
New York University	(1898)	75.9
Dartmouth Med. School	(1907)	76.5
Jefferson Med. Coll.	(1898)* (1907)	77, 83.5
Hahnemann Med. Coll., Philadelphia	(1907)	82
University Coll. of Med., Richmond	(1907)	76.6
McGill University, Canada	(1903)	84.1
Laval University, Quebec	(1907)	77.3

FAILED.		
Baltimore Med. Coll.	(1906) 68.5; (1907)	68, 68.9
Baltimore University	(1904)	61.2
Boston University	(1907)	70.3
College of P. & S., Boston	(1905) 66.3; (1907)	67.2
St. Louis Coll. of P. & S.	(1906)	55.5
Woman's Med. Coll. of Pennsylvania	(1904)	70.5
University of Vermont	(1906)	65.5, 71.1
Laval University, Quebec	(1906)	52.3
University of Athens, Greece	(1896)	66.8
Alexanders University, Finland	(1902)	64.2

* Grade not given.

Minnesota October Report.—Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, Oct. 1-3, 1907. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 32, of whom 17 passed and 15 failed. Three reciprocal licenses were granted at this examination. The following colleges were represented:

PASSED.

College.	Year of Graduation.	Medicine.	Surgery.	Obstetrics.	Materia Med. and Tox.	Anatomy and Histology.	Physiology.	Chem. and Eye and Ear.	Pathology and Bacter.	Prev. Med. and Med. Juris.	Dis. of Women and Chil.	General Average.
Rush Med. Coll.	1899	78	75	78	75	78	75	75	75	75	75	75.9
Rush Med. Coll.	1907	85	81	81	79	79	86	68	87	78	76	80.5
Rush Med. Coll.	1907	92	77	83	90	97	93	85	91	79	77	86.4
N.-W. Univer. M. Sch.	1907	92	83	79	87	78	81	89	91	76	75	83.1
Coll. of P. & S., Chicago	1906	86	75	83	69	78	85	76	80	69	75	77.6
Coll. of P. & S., Chicago	1907	88	82	83	91	91	94	87	85	74	77	85.2
Coll. of P. & S., Chicago	1907	94	75	69	83	81	83	85	83	76	78	80.7
Hahnemann M. C., Chi.	1905	92	68	81	81	87	90	75	80	79	76	80.9
Johns Hopkins Med. Sch.	1904	92	88	92	97	100	98	78	98	78	80	90.1
University of Michigan	1907	85	81	79	97	90	92	87	85	80	80	85.6
University of Michigan	1907	80	69	75	76	87	81	76	81	74	75	77.4
University of Minnesota	1907	85	81	79	71	78	75	75	85	72	78	77.9
University of Minnesota	1907	90	75	90	78	88	90	76	80	72	74	81.3
University of Minnesota	1907	85	77	75	78	78	76	75	77	67	75	76.3
Hamline University	1906	80	75	72	84	75	75	73	69	74	76	75.3
Nebraska Coll. of Med.	1907	82	76	76	87	75	83	79	82	74	75	78.9
University of Toronto	1907	93	78	75	78	90	87	74	86	77	80	81.8

FAILED.

Chicago Coll. of M. & S.	1907	77	65	78	77	81	78	72	66	66	75	73.5
Amer. Coll. of M. & S.*	1905	68	51	70	55	75	43	57	30	67	47	56.3
Sioux City Coll. of Med.	1902	68	28	64	64	75	64	50	45	72	65	59.5
Fort Wayne Coll. of Med.	1905	66	61	75	84	78	64	64	68	71	73	70.4
Kentucky University	1905	59	26	35	30	69	30	29	22	60	71	43.1
Baltimore Medical Coll.	1907	78	70	78	69	70	75	70	78	68	56	71.2
Harvard Med. School	1907	74	63	70	52	87	80	65	71	65	75	70.2
Hamline University	1904	68	58	59	75	68	53	60	47	74	76	63.8
Hamline University	1906	87	58	75	62	79	77	71	77	74	57	71.7
Hamline University	1906	81	75	75	72	79	78	64	75	68	70	73.7
Hamline University	1907	68	57	75	75	75	75	69	84	76	76	73.
University of Minnesota	1906	81	62	77	57	70	76	60	75	73	75	70.6
University of Minnesota	1906	62	60	67	24	72	36	32	48	72	63	53.6
Ec. Med. Inst., Cincinnati	1899	62	39	62	39	70	54	46	55	72	70	56.9
Queen's Univ., Ontario	1906	75	66	60	40	90	76	57	69	64	75	67.2

*In 1907 this school changed its name to Chicago College of Medicine and Surgery.

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Detroit Coll. of Med.	(1906)	Michigan
Dartmouth Medical College	(1902)	Maine
Medical College of Ohio	(1906)	Ohio

Book Notices

HUMAN ANATOMY, Including Structure and Development and Practical Considerations. By Thomas Dwight, M.D., LL.D., Carl A. Hamann, M.D., J. P. McMurrich, Ph.D., G. A. Piersol, M.D., Sc.D., and J. W. White, M.D., Ph.D., LL.D. Illustrated by John C. Heisler, M.D. Edited by George A. Piersol. Cloth. Pp. 2088. Price, $7.50. Philadelphia and London: J. B. Lippincott Co., 1907.

The publishers of this work announce that it is "the first entirely American Anatomy in both text and illustrations," being the product of American authors exclusively. The consideration of the subject is taken up under the following heads: Elements of Structure; Early Development; Elementary Tissues; Skeleton and Joints; Muscular System; Vascular System; Nervous System; Sense Organs; Gastropulmonary System and Urogenital System. The first division occupies ten pages and is a general consideration of the different kinds of tissues entering into the formation of the body. It serves as an introduction to the second section, that on early development, to which forty-eight pages are devoted, giving the synopsis of the principal facts of embryology, especially those which are necessary for a clear understanding of the structure of the adult body. The third and last section of the introductory portion of the book is devoted to a consideration of elementary tissues. This occupies thirty pages and takes up the epithelial tissues and connective tissues, together with bone and its development. The illustrations in the embryologic portion of the book are clear and illuminating and are a pleasing contrast to similar illustrations in some of our textbooks of anatomy, which apparently date back to early periods of embryologic knowledge.

The section on the skeleton and joints occupies 350 pages. The illustrations showing the various bones in different positions are, as a whole, well executed and to a certain extent depart from the conventional osteologic illustrations which have been in general use. An admirable feature is the small outline of the bone with the areas of origin and insertion of the various muscles marked thereon. This plan obviates the necessity of marking all the anatomic points of interest and muscular insertion on a single cut, which often results in so many references as to confuse the student. The illustrations showing the cross-sections of joints and the various aspects of the different joints with the ligaments intact, are also of value. Particularly good, from a practical standpoint, are the drawings showing the various locations and lines of fracture in the various bones. Also of practical value are the illustrations showing the location and relation of the various synovial sacs, and of the bones of the extremities in various positions, as well as the diagrams showing the direction of the axes of the various bones and joints. Ossification is shown by two-color illustrations with the bone centers properly designated. The work really merges into a surgical anatomy at times, as shown by the illustrations showing the position of the various joints and limbs following dislocation and fracture. There is much additional matter of value, such as the six pages on the anthropology of the skull, chapters on the mechanics of various bones and on practical considerations regarding bones, joints, etc. More space than usual is devoted to the sesamoid bones, a table from Pfitzner showing the percentage of frequency of the various bones under different conditions.

The section on the muscular system occupies 220 pages and takes up muscular structure in general, followed by the usual anatomic description of the muscles by groups. The two-color plates used to illustrate this section of the book are admirable. The fasciæ are considered in connection with the muscles. Particularly to be commended is a drawing on page 552 showing the deep and superficial cervical fasciæ in longitudinal section. This most important subject is one which the average medical student often fails to grasp as he should. The illustrations of the musculature of the pelvis and perineum are also excellent, but the amount of space devoted to the consideration of the perineum and perineal fasciæ hardly seems to be proportionate to their importance. The muscles of the arm and leg are well described and illustrated, cross-sections being frequently used. Particularly valuable illustrations are those on pages 614 and 615, showing the tendon sheaths of the extensor and flexor tendons. The illustrations showing the surface markings are photographed from the living subject and are very good.

The section devoted to the vascular system occupies 320 pages. The structure and the composition of the blood are first considered, after which the heart is taken up in detail, the section on the development of the heart and blood vessels being particularly exhaustive. Cross-sections are used to illustrate the relation of the pleura and pericardium to the heart and other structures. The large vessels are then taken up in turn and are considered with their branches. This section is copiously illustrated, although perhaps the most difficult part of the subject to teach from a text-book. The illustrations on page 785, showing the variations of the superficial palmar arch, are particularly interesting, as is also that on page 873, showing the venus sinuses at the base of the skull.

The lymphatic system is taken up in connection with the vascular system and considerable more space is devoted to it than is usually found in text-books of anatomy, the illustrations being particularly instructive. This is to be commended, inasmuch as the average text-book has paid far too little attention to this most important subject. Some of the illustrations in this section are particularly good, for instance, that showing the relation between the deep cervical glands and the retropharyngeal lymph nodes, taken from Most, one showing the lymphatics of the tongue, from Poirier, and those showing the lymph nodes of the stomach and appendix and of the superficial inguinal region.

The consideration of the nervous system occupies 375 pages and is copiously illustrated. Cross-sections of the cord and medulla are from preparations made by Professor Skiller. Most of the drawings illustrating the development of the brain are semidiagramatic, as is inevitable. They are original, however, and many of them are unique, such as the one on page 1163, showing the anterior pillar of the fornix cut through, with the fornix turned back, exposing the lateral sinuses and chorioid plexuses. Another valuable diagram is that on page 1170, showing the reconstruction of the corpus striatum and optic thalamus. The cross-sections of the brain showing the large nuclei are also to be commended. The chapters on development of the brain and meninges, and cerebral localization are concise and well illustrated. The portion of this section devoted to the peripheral nervous system is necessarily somewhat conventional, as this subject has been exhaustively considered repeatedly. Most of the illustrations, however, are original and all are well executed. The consideration of the sympathetic nerves is more systematic and much more satisfactory than that found in most of the text-books.

The section devoted to the special sense organs occupies about 150 pages and compares favorably with the other portions of the book. The cuts of the nasal fossæ and accessory air spaces, taken from Kallius, the cuts illustrating the chapter on the eye and the text and the illustrations of the chapter on the ear, are the most noteworthy features of this section.

Under the gastropulmonary system are taken up all of the organs of the thoracic and abdominal cavities, as well as the pharynx, esophagus, trachea, etc. The gross and microscopic anatomy of all the abdominal organs is taken up in detail, the development of the abdominal organs being considered from a comparative standpoint. Under the head of practical considerations on the peritoneum, the subject of hernia is considered, the different varieties being illustrated by diagrams. Retroperitoneal hernias and retroperitoneal fossæ are also considered in this connection. The accessory organs of digestion are then taken up, followed by a consideration of the organs of respiration. The illustrations of the histologic structure of the organs are especially good.

Under the last section of the book, the urinary and genital organs are taken up. In the chapter devoted to the kidneys, one would be glad to see more copious diagrams or illustrations showing the surgical relation of the kidneys, as well as the relation of these organs to other abdominal viscera. The illustrations in this particular chapter are for some reason less copious than in other parts of the work. The consideration of the perineum and of its applied anatomy seems specially valuable from a practical standpoint.

The mechanical work of the book taken as a whole is excellent, the paper being good and the type clear and readable. The book is in every way a credit to the anatomists engaged in its preparation.

The publishers are open to criticism on two points. The first is that the book is far too large and heavy for ordinary student use. If it could not be abridged (and it is difficult to see what parts could be spared) then it should have been divided into two volumes. In any event, there is no excuse for the very poor work which has been done on the binding. The completed volume is cumbersome and is bound in a most flimsy manner. A book of this character should be so arranged and bound that it will be of convenient size and shape for consultation and of reasonable durability.

THE CHEMISTRY OF COMMERCE. A Simple Interpretation of Some New Chemistry in Its Relation to Modern Industry. By Robert Kennedy Duncan, Professor of Industrial Chemistry at the University of Kansas. Illustrated. Cloth. Pp. 263. Price, $2.00. New York and London: Harper & Bros., 1907.

The author uses special instances of the application of science to industry to make a story as interesting as a romance and full of information which should be of value and interest to physicians as well as to laymen. The lessons drawn concern not only the trades which are described but are also suggestive for others. Most important of all is the moral lesson that more is to be gained by increasing efficiency and economy by the intelligent application of science than by high finance or deceptive advertising. In other words, honesty is, after all, the best policy. The author holds that the busi-

ness of lying advertisements has been so overdone that people are beginning to be slow to believe such exaggerated statements, and many manufacturers have actually begun to advertise the plain truth. The pure food law is one expression of popular will in this matter and will probably be reinforced by other measures until the only resource of the manufacturer will be to raise his efficiency by the application of science, particularly chemistry, to industry so that he can afford to produce honest goods in competition with other honest manufacturers.

The first chapter describes the nature of catalysis and some of the operations in which the use of small quantities of catalytic substances have rendered economical and successful manufactures which would have been otherwise unprofitable. The fixation of nitrogen forms a most interesting chapter showing how artificially prepared fertilizers may be made to take the place of the natural deposits of nitrates and thus save the world from starvation that, some claim, threatens it in a quarter of a century if nothing is done to prevent it. Incandescent lights, gas and electric, and the various applications of high temperatures, including the making of artificial diamonds, are dealt with in the next two chapters. The industry of glass making is used to illustrate how, in the absence of chemical knowledge, wasteful experiments impair the efficiency of the business in America, while methodic scientific investigations have enabled the glass makers at Jena to make the finest glass with economy and certainty. Industrial alcohol and floral perfumes occupy two interesting chapters and then the author enters on a branch of his subject in which his work and the influence of what he says are of the greatest value to the physician as well as to the lay public whom he addresses, viz., the making of medicine. The central thought in this exposition of his theme is that the chances of error in the making of medicines are so many that the physician on whose decision in these matters a life may depend, can only avoid injuring his patient by using products that he knows have been made by manufacturers who have had the honesty and the intelligence to apply the safeguards of scientific caution in the preparation of powerful drugs. We can not forbear quoting a passage:

"What can the physician do? He has been known to do this: A young man sick unto death; he must sleep. Now the physician had been reading in the advertising pages of his medical journal of a hypothetical hypnotic called, let us fancy, *idealone*, the sole substance manufactured by a firm with an aggressive and persuasive manager; the physician prescribes *idealone*. But *idealone* happens to be a severe heart depressant, and under the influence of its hypnotic power the young man sleeps, it is true, but for a long, long time—and on the hillside. The physician made a mistake the foundation of which lay in this: that he did not take into account the character of the firm that made *idealone*. More and more, the physician is forced to rely on the character of the manufacturer. The manufacturer of pharmaceutical preparations must be as careful of his reputation as a maid." Under the designation of "Messrs. Method and Efficiency" the author describes the care exercised by the ideal manufacturer in his search for a new synthetic. Again he drives home his lesson that ethical business, scientific efficiency, always and wholly pays. The next chapter deals with opsonins, etc., and this is followed by an account of some of the wonderful properties of cellulose, while the book is closed by an account of the establishment of an industrial fellowship at the university, an example which might well be followed by manufacturers generally.

When we consider that whoever deals with material of any sort must ultimately come face to face with some chemical problem, we can not doubt that the right sort of book treating of commercial chemistry must be useful to all classes of readers, and we believe that we have here the right sort of book on this subject.

SOME POINTS IN THE SURGERY OF THE BRAIN AND ITS MEMBRANES. By Charles A. Ballance, M.V.O., M.S., F.R.C.S., Royal Prussian Order of the Crown. With Illustrations. Cloth. Pp. 405. Price, $5.00. London and New York: Macmillan & Co., 1907.

Under this modest caption, the author has presented a masterly review of modern brain surgery to the advancement of which he has in no small part contributed. Given as one of the Lettsomian lectures under the auspices of the Medical Society of London, he has nevertheless covered most thoroughly the entire field of brain surgery; since what is applicable to tumors is equally applicable to other surgical affections. Beginning with some reminiscences of Lettsom, that demonstrating the latter's immense worth and charity should have made him better known than has the ill-directed wit of an epigramist, he first emphasizes the importance of a clear understanding of the spaces between the meninges. To the drainage of collections of fluids in these spaces, especially will his name become linked because of methods perfected by him, that had their inception in America. His boldness led him to leave buried within the cranium what had until then been buried, but attached to its periosteum. Again, the ligation of both common carotids for congenital hydrocephalus is in accord with the knowledge that "the blood supply to the brain is of much more relative importance in such cases than that to the cerebral substance and the chorioid plexus." Most commendable is the careful citation of case histories illustrative of his text, as well as copious drawings, photographs, pictures, original as well as selected, which go to make the book a complete whole, of which the author may be justly proud. Praise is deserved by the publishers, Macmillan & Co., who have presented in excellent shape, on fine paper, in readable type, this excellent treatise.

ALCOHOL AND THE HUMAN BODY. An Introduction to the Study of the Subject. By Sir Victor Horsley, F.R.S., etc., Surgeon to National Hospital for the Paralyzed and Epileptic, and Mary D. Sturge, M.D., Lond., Physician for the Birmingham and Midland Hospital for Women. With a Chapter by A. Newsholme, M.D., etc. Cloth. Pp. 370. Price, $1.50. New York and London: Macmillan & Co., 1907.

Clear in type and well illustrated, this cogent summary of a great subject will be found valuable for reading or for reference. It does not pretend to present any pro-alcohol opinions, but is a well-written collection of scientific data showing the injurious effects of alcohol on the human body. Many illustrations are in colors, others are diagrams and charts, all adding greatly to the effectiveness of the presentation.

Medicolegal

All Traveling Persons Who Sell Medicine at Retail Must Pay Tax.

The Court of Criminal Appeals of Texas says, on a rehearing of the appeal of Needham vs. State, that, as it construes the Texas statute requiring the payment of a $100 tax by every traveling person selling "patent" or other medicine, the exemption contained therein is in favor of the commercial traveler, the drummer and the salesman making sales or soliciting trade for merchants engaged in the sale of drugs or medicines by the wholesale. This does not exempt either of the classes named from the tax if they sell at retail, although they represent a wholesale house. The exemption is in favor of a wholesale house making sales as a wholesale house to retail dealers, and it was not intended to exempt persons selling at retail for a wholesale house. The construction now placed on the law renders every traveling person selling "patent" or other medicines, whether he represents himself or some other person, and whether he represents a retail or a wholesale house, if he sells at retail, liable to the tax, and so the act is not violative of the Constitution as class legislation; that is, all traveling persons doing the same thing (that is, selling "patent" or other medicines by retail) are amenable to the tax. The other construction which the court heretofore placed on the act would be class legislation, as it would permit one person to do, without being taxed, the same thing for which another would be taxed.

Physician's Appearing Repeatedly as Witness for Certain Attorneys on Contingent Basis May Be Shown.

The Court of Civil Appeals of Texas says that, in the personal injury case of Horton vs. Houston & Texas Central Railway Company, complaint was made of the latitude allowed counsel in the cross-examination of a physician called by the plaintiff to testify as to the extent of his injuries. In an effort to show interest and bias on the part of the physician, he

was asked if he had not testified for the plaintiffs in many damage suits brought by the attorneys representing this plaintiff in this cause. The witness admitted that he had so testified in several, but could not state how many. Counsel was then permitted to ask him if he had not testified in many cases, naming them, the questions also tending to elicit the fact that his fees for attendance on the plaintiffs in the cases mentioned were dependent on recovery of damages. The court thinks it was proper to permit counsel to show these facts by the witness if he could. If the questions failed to elicit the facts sought to be proved, the plaintiff was not injured. If they did, the facts were material. Certainly on cross-examination counsel should have been permitted to ask such questions as if answered in the affirmative would have shown that the witness had been habitually called by the plaintiff's attorney and that his fees for professional services had been contingent on the recovery of a judgment for damages. This fact might be considered by the jury as affecting the value of his opinion in this case. His failure to recall the number of cases in which he had testified authorized counsel to name a particular case. The extent to which such examination should be prolonged was a matter largely in the discretion of the trial court. Of course, it was not proper to inquire into the correctness of his opinion given in the cases about which he was questioned.

Admissibility of Dying Declarations Against Abortionists—"Uterogestation" Synonymous with Pregnancy.

The Supreme Court of Nebraska says that on the appeal of Edwards vs. State, where there was a conviction of homicide by the use of instruments used in attempting to procure an abortion, it was contended that dying declarations were not competent evidence for the reason that this was a prosecution for procuring an abortion, and that the death of the deceased was not the subject of the charge, and that the death of the woman in such a case as this was only incidentally involved and was not the essence of the offense. Some text-writers, but not all, lay down this rule, and there seems to be a substantial conflict in the decisions of the courts with reference to whether or not dying declarations are admissible in cases of this nature. The conflict, however, seems to be more apparent than real, depending largely on the particular language used in the different statutes relating to the offense of procuring an abortion or of causing death while in the commission of an abortion. The earlier cases seem to adhere to the rule stated and the later to take the opposite view. The fundamental distinction between the cases, or at least between those which are best considered, is that under one class of statutes the offense is punishable whether death occurs or not, and in the other class the crime defined is not committed unless death ensues as a result of the operation. While the statutes in the states of Indiana, Wisconsin, Minnesota, Michigan, Iowa, Kentucky, and New Jersey are not identical in language with that of Nebraska, nor with those of each other, their highest courts have held such declarations admissible in cases of prosecution for death caused by the use of means to procure unlawful abortion, and this court prefers to adopt such rule. It was insisted that the Nebraska statute was copied almost verbatim from the laws of Ohio, and that state had decided that dying declarations were not admissible in proceedings brought under this section. Nevertheless, the court finds reasons for holding that in a prosecution for homicide in procuring an abortion under Section 6 of the Criminal Code of Nebraska, dying declarations of the deceased may be admitted in evidence under the same conditions and limitations as in prosecutions for murder or manslaughter.

Again, the court says that it was urged that the term "uterogestation" was not synonymous with "pregnancy," that there might be gestation in the Fallopian tube, and hence that the information was fatally defective, in that it did not charge that the abortion was committed during the period of uterogestation. But the court does not think that the indictment was defective for the lack of such allegation. The language of Section 6 of the Criminal Code of Nebraska, under which the charge was made, is as follows: "Any physician or other person who shall administer, or advise to be administered, to any pregnant woman with a vitalized embryo, or fetus, at any stage of uterogestation, any medicine," etc. The court thinks that the use of the words "at any stage of uterogestation," in the statute, means at any stage of pregnancy. It says that at common law it was thought that a person could not be guilty of abortion unless the pregnant woman was quick with child. The clause here considered was evidently inserted in the statute to avoid the perplexing and doubtful questions which might be raised as to the time of "quickening" under this view of the law. One of the definitions of the word "uterogestation" given by the Standard Dictionary, by the Century Dictionary, and by Webster, is "pregnancy," and this is the sense in which it is used in this connection.

How Term "Accident" Should be Construed—Hemorrhage of Lung from Lifting.

The St. Louis Court of Appeals says, in the case of Young vs. Railway Mail Association, that accident assurance companies do business mostly with the common people, and the term "accident," as used in these policies, should be construed most strongly against the companies, and be defined according to the ordinary and usual understanding of its signfication. In this case the plaintiff took hold of a mail sack, and, with the aid of a helper, attempted to place it in a stall which necessitated raising it about six feet from the floor. In doing this he ruptured his right lung. There was no evidence that he had a hidden disease of the lungs, such as tuberculosis. On the contrary, the fact that the hemorrhages ceased and his lungs healed, according to the expert evidence, was proof that his lungs were sound. On the evidence and on the great weight of authority in this country, the court thinks the plaintiff made a clear prima facie case of injury by accidental means, and that the question as to whether or not his injury was caused by "external, violent, and accidental means," was for the jury.

Jury Should Determine Whether Experts Agree or Not.

The Court of Civil Appeals of Texas holds, in Galveston, Houston and Henderson Railroad Company and others vs. Alberti, a personal injury case brought by the latter party, that it was not error to sustain an objection of the plaintiff to a question asked by the defendants of a physician, as to whether he concurred in a supposed opinion of another physician as to the extent of the injury to the plaintiff's ankle. Each witness could give his professional opinion as to the extent of the injury, and, if it was material to ascertain whether they coincided, the jury could then determine whether or not there was the usual difference between such professional gentlemen regarding the subject matter of the injury as is found to exist in regard to other matters.

Validity of Requiring Vaccination.

The Supreme Court of Ohio holds, in State vs. Board of Education of the Village of Barberton, that Section 3986 of the Revised Statutes of Ohio authorizing and empowering the boards of education of each school district "to make and enforce such rules and regulations to secure the vaccination of, and to prevent the spread of smallpox among the pupils attending or eligible to attend the schools of the district, as in its opinion the safety and interests of the public require," is a valid enactment, not repugnant to the Constitution of the State of Ohio, nor violative of the fourteenth amendment to the Constitution of the United States; and under the power thereby conferred, boards of education, in the exercise of a sound discretion, may exclude from the public schools all children who have not been vaccinated.

Whether a rule or regulation adopted by the board of education under favor of the provisions of above Section 3986 is a reasonable rule or regulation is to be judged of, in the first instance, by the board of education, and the courts will not interfere, unless it be clearly shown that there has been an abuse of official discretion.

It is matter of universal knowledge that, with our present rapid means of intercommunication, smallpox is liable to make its appearance at any moment in any community. If then, as is the common belief, vaccination is a preventive, or a protection, against this dread disease, which Macaulay denominated "the most terrible of all ministers of death," certainly it may not be said that for a board of education to adopt, as a pro-

tective and precautionary measure, a rule or regulation requiring vaccination as a prerequisite to the right to attend public schools, is an unwarranted or unreasonable exercise of the power expressly conferred on it by statute, even though smallpox does not at the time actually exist in the district or community, for it may be truly said that "an ounce of prevention is worth a pound of cure."

Physician's Statement as to Suffering of Patient Not Hearsay.

The Kansas City Court of Appeals says that, in the personal injury case of Detrich vs. Metropolitan Street Railway Company, the physician who attended the plaintiff, on being asked in what condition he found him on the next day when he was called to see him, answered, among other things, that he was suffering in the hip and back. This was objected to as being necessarily beyond the knowledge of the witness, and that it must have been based on hearsay; that is, on what the plaintiff told him. But the Supreme Court thinks that the objection was not well taken. It states that it can not say from the face of the answer that it was hearsay. Nor can it say that it was based on mere opinion as distinguished from knowledge. There are various ways in which a physician ascertains, with all reasonable degree of certainty, where and how a patient is suffering from pain. It may be that a part of his knowledge has come from statements of the patient. If statements are made to him, he is supposed, as a careful and skilful practitioner, to verify them and to come to his conclusions of fact from his entire examination and observation. He, in common with all other witnesses, may be mistaken, but that does not affect the admissibility of the evidence. Cross-examination may disclose that the statement is not worthy of much weight, but again, that does not affect its admissibility, unless, of course, it should develop that his statement was based on no proper foundation. Neither was the objection that the statement was mere opinion or belief, instead of knowledge, well taken. If carried out, in certain lines of reasoning, all knowledge could be said to be mere belief or opinion.

Attending Physician Sued by Consultant Entitled to Show Custom to Charge Patient.

The Supreme Court of New Jersey says that the case of Baer vs. Williams was brought by one physician against another for professional services rendered to a patient of the latter. The plaintiff visited the defendant's patient at the request of the defendant, who was the attending physician. There was no agreement between the two physicians either as to the amount to be charged for the plaintiff's visit or as to whether it was to be charged to the attending physician or to his patient. There was proof that the patient was the defendant's mother-in-law and a member of his family at the time, and also that she was without means of her own. There was no proof of the value of the services rendered by the plaintiff, except his own testimony that in this instance he charged $50 and entered it on his ledger, and that for similar services he frequently had charged as high as $100. The defendant offered to prove a custom of the medical profession to the effect that, where a physician is called into consultation by the attending physician, the charge of such consulting physician is always made to the patient, and not to the attending physician, and that it is never the custom in the medical profession for the consulting physician to look to the attending physician for the payment of the consulting physician's charge. This offer was overruled by the district court, who, at the conclusion of the case, charged the jury that, if the plaintiff went down to Haddonfield and saw the patient, he had performed his work, and was therefore entitled to recover, and that he (the trial judge) thought that $50 was an ordinary price. The result was a judgment for the plaintiff. But that judgment must be reversed. There was no legal proof of the measure of damages the plaintiff was entitled to recover under the implied contract with the defendant, and on the question of such implied contract the offer of the defendant should have been received. It might be that the defendant would not have been able to prove the custom that he offered to show, but by overruling his offer the existence of the custom was admitted for the purposes of the case and only its pertinence to the issue denied.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

October 31.

1 *Superiority of Primary Over Secondary Cesarean Sections, and the Feasibility and Advantages of a Pre Determination of the Method of Delivery. E. Reynolds, Boston.
2 *Origin of Right-Handedness. G. M. Gould, Philadelphia.
3 *Medical Expert Testimony. E. W. Taylor, Boston.

1. **Cesarean Section.**—Reynolds has made an exhaustive inquiry into the question of Cesarean section. He had a list made of all papers containing case reports of Sænger Cesarean section, done within the last ten years by operators who had had at least five cases, and divides these cases into three classes: 1, Primary sections, performed before the beginning of labor, or with the commencement of the first pains; 2, secondary sections, after a certain amount of labor and prior to exhaustion; 3, late sections, performed after definite arrest of the head of the brim. Analysis of 229 cases by 20 operators gives the following results: In 82 primary cases, 1 death, mortality 1.2 per cent.; in 158 secondary cases, 6 deaths, mortality 3.8; in 49 late cases, 6 deaths, mortality 12 per cent. He concludes that it is desirable that patients who ought to be subjected to Cesarean section should be selected in advance of labor, whenever the conditions make this possible. The prediction of the result of natural labor depends on the capacity for estimating in advance each of the three great mechanical factors: The obstacle of the pelvis, the maternal muscular powers and the characteristics of the head. Regarding the pelvic obstacles, it is not a mere matter of measurement so much as a question of shape. He describes in detail the justo minor type and says that a hint as to its existence is afforded by the history of late sexual development. If an examination of the patient standing, and with the corsets removed, demonstrates the presence of a straight spine and sacrum, with an ill-marked intergluteal fold and comparatively horizontal, sharply curved iliac crests, with the anterior spines high above the symphysis; if this is confirmed by the relation between the interspinal and intercristal diameters as obtained by measurement, and by the shallowness of the longitudinal, and exaggeration of the horizontal curves as obtained by internal palpation of the sacrum and lateral walls of the pelvis by the fingers within the vagina, the diagnosis of this form of pelvis may be considered established.

He next describes a pelvis with an excessively curved axis. This condition occurs in the highly feminine type of women and tends intrinsically to be roomy, but the inclination of its brim makes labor difficult with normal diameters, and a serious obstacle when its size is even slightly diminished. The probable existence of this pelvis may be suggested by the excessive anteroposterior curves of the woman's figure as she stands clothed, but a determination of the degree of alteration which is present necessitates a study of the spine in a standing posture after the corsets have been removed. The points of especial importance in determining the degree of alteration present are the length and direction of the inner wall of the symphysis, the angle between the superior and inferior straits, and the excess of curvature in the lumbo-sacral region.

Until recently the conditions of practice were such that obstetric experts saw such patients only after the failure of prolonged labor. The late section, even when followed by hysterectomy, is so fatal an operation as to be justifiable only in those cases in which at best the mother's condition is so bad that the chance for the child takes precedence. The second point is that the general practitioner should be taught that the time for him to seek the advice of a specialist is when he first feels anxiety about a pregnancy or an impending labor, and not after the prospects of both mother and child have been compromised by exhaustion in labor.

2. **Right Handedness.**—This article has essentially the same purpose as No. 4.

3. **Medical Expert Testimony.**—Taylor takes up the medical expert witness from the viewpoint first of the court, second of the jury, third of the attorneys for the prosecution and defense, and finally, of the medical expert witnesses appearing respectively for the plaintiff and defendant. The judge's opinion will be based solely on the honesty, clearness of statement and knowledge of the subject shown by the witness. With regard to the jury, the best intentioned and even confident witness may leave a false impression because of the limitation of his means of expression, increased by the impossibility of putting accurate, technical, precise ideas in language that can be understood by the man in the street. With regard to the attitude of the attorneys, the whole modern system is altogether wrong. Taylor does not believe that in many instances the mature judgment of a conscientious medical witness is finally given to the jury under our present system, and the pitiable part of the situation is that each attorney is doing his best to prevent the clear presentation of such a mature judgment. With regard to the medical experts themselves, Taylor condemns the pernicious practice of contingent fees for medical expert testimony. It multiplies suits, fosters neuroses, and makes a partisan of a man "with all the consequences to his reputation which that implies." It is unfortunate that a medical expert should ever be regarded in the light of a defendant or plaintiff witness. The present system, however, forces this distinction on them. Finally the author approves of the tendency shown by multiplying instances in which to the satisfaction of all concerned commissions of experts have been appointed whose duty it is to report directly to the court. The ideal toward which the medical profession must strive in this matter of medical expert testimony is that of an appointment by a central authority, of physicians to sit in judgment on the medical aspects of the case presented.

Medical Record, New York.

November 2.

4 *Study of Case of Two-Handed Synchronous Writing. G. M. Gould, Philadelphia.
5 *Acute Anterior Poliomyelitis, or Acute Spinal Paralysis of Children. J. Collins, New York.
6 *Mental Defectives: An Attempt to Treat Some Cases with Medicines. S. Block, Brooklyn.
7 Primary Melanosis of the Palate: Nasobuccal Fistula of Recent Sarcomatous Origin. J. N. Roy, Montreal.
8 Streptococcemia Accompanying Appendicitis. D. Sheitlis, New York.

4. **Two-Handed Synchronous Writing.**—Gould protests against the attempt to make those who are naturally left-handed write or perform other manual acts in the conventional right-handed manner. The hand follows the eye and in every child one eye, usually the right, sees better than the other. For co-ordinating purposes the visual and other centers entering into the performance of compositely formed acts must be on the same side as the centers for those acts. A right-handed person has the centers for writing, speech and memory on the left side and the visual centers also. Gould gives instances of permanent crippling of the faculties and mechanism of writing due to forcing a left-handed person to write with the right hand.

5. **Acute Anterior Poliomyelitis.**—Collins reviews the history of recent epidemics and considers the nature of the present epidemic in New York; he emphasizes two points mentioned editorially in THE JOURNAL, October 19, namely, the fact that nothing definite in regard to the etiology has been so far learned, and that secondly, the number of cases, some of them severe, in which a good recovery, i. e., recovery without marked atrophy, has ensued. The explanation of these cases is that the inflammation in the anterior horns is not so intense as to destroy the cell bodies and nutritive processes of the peripheral motor neurons. He suggests that physicians seeing children sickening with the early symptoms of the disease should have the fluid from a lumbar puncture and the urine and feces collected and seek the services of some research institution.

6. **Mental Defectives.**—Block considers that many cases of mental deficiency are due to such conditions as anemia, tuberculosis, endocarditis or scorbutus, and in some of these cases at least proper medicinal treatment will prove of service. These conditions are apt to cause pin-point hemorrhages, on which the author considers symptoms to depend. He reports two very interesting cases out of many in which two apparent incorrigibles materially improved in habits, behavior, mental capacity, etc., after treatment with a minim of nitric acid and a saturated solution of citric acid, three times daily, increasing the number of minims by one at short intervals until the limit of toleration was reached.

New York Medical Journal.

November 2.

9 *Sanitation. E. H. Porter, Albany, N. Y.
10 *Physical Defects of School Children Causing Subnormal and Mentally Deficient Pupils. S. W. Newmayer, Philadelphia.
11 *Protection of Patient During Roentgen Exposures. R. H. Boggs, Pittsburg, Pa.
12 *Diet in Tuberculosis. J. V. White, Detroit, Mich.
13 *Treatment of Anemia. C. Pope, Louisville, Ky.
14 The Making of a Physician. S. A. Mereness, Oneonta, N. Y.
15 Hyoscin Hypodermic Anesthesia. F. B. Kirby, Philadelphia.
16 Case of Profuse Renal Hematuria. J. E. Lane, New Haven, Conn.

NOTE.—The *New York Medical Journal*, October 26, contains the following correction of an error that appeared in Dr. Fisher's article on the diagnosis of tuberculosis in infancy and childhood. We therefore reproduce the method of inoculation as amended by him for the original article: "Scarify three small areas of skin, but not enough to produce a bleeding surface. Inoculate one drop of dilute tuberculin into two of the scarified areas and leave the third area as a control without inoculating. The method pursued should be similar to the one ordinarily employed in vaccination."

9. **Sanitation.**—Porter describes some of the results attained since the last sanitary conference. The investigation of summer resorts has been continued, especially with a view to "summer resort typhoid." Sanitary investigations have been made of various cities. All the principal watersheds of the state have been studied with reference to the pollution of streams and lakes. Every public water supply has been examined and reported on. Every sewage disposal plant has been examined and the effluent analyzed. A plan for the examination of the eyes and ears of school children goes into operation in 450 high schools this fall. Examinations of meats and liquors have been held, with salutary effects. There has been a tuberculosis exhibition and a hygienic laboratory exhibit, and traveling libraries and bacteriologic outfits are being provided for the use of health officers. It has been determined to begin the publication of a series of circulars and pamphlets on topics concerning the public health. Porter says that while no appropriation of public moneys should be made without a definite expectation of efficient public service in return, there can be no service without means. He contrasts the liberal appropriations of Pennsylvania and Masachusetts with those of New York. The department advocates a wise and practical pure food law to be enforced by the health department. He dilates on the Cancer Laboratory and says that it has not concerned itself with attempting to find a cure. Its work, therefore, may not be popular, but it is scientific, and in the end will accomplish more than would a search first in this direction and then in that for possible remedial agents. A remedy will be found when the cause is discovered. He deprecates the exploiting of cancer cures by irresponsible physicians, and particularly the expression of immature opinions on the contagiousness of the disease, which are exploited by the sensational press. With regard to the establishment of a public health diploma, he goes into detail regarding the requirements existing in Great Britain and points out that in this country such advance is handicapped by inadequate provision for postgraduate teaching in this direction, and by inadequate financial returns to the health officer for the expense entailed in taking such a special course. There is a tendency, which the department is falling in with, to obviate the first difficulty; and with regard to the second he suggests that the same power of the organized medical profession that has been effective in bringing the insurance companies to terms, can well and rightly be employed in securing adequate recompense for health officers throughout the state. He points with gratification to the marked and increasing progress that has been made in lessening the pollution of watersheds, and figures up the financial cost to the state of the amount of preventable typhoid at $7,000,000 per annum. With regard to tuberculosis, he indicates the following steps: 1. Notification

and registration. 2. Establishment of district stations. 3. State camps for consumptives. 4. Local hospitals. In regard to the work of the department generally and public service he suggests for a motto: "Stay and Fight It Out."

10. **Defects of School Children.**—Newmayer defines a mentally deficient pupil as one who is so far behind the normal child of a similar age in the development of its mental faculties that it is unable to acquire a normal education. Defects are either inherited or acquired, and the subjects may be classed as imbecile, feeble minded, mentally deficient, backward or dull pupils, and those suffering from minor defects in acquiring certain subjects. There are no sharp lines of demarcation and one runs into the other, making the difference one of degree only. The chief factors that may cause mental deficiency, backward or subnormal pupils, are fatigue or chronic exhaustion, starvation, toxemia, nervousness, defective vision, hearing or speech. He considers these factors in detail and presents a tabular form which he has had drawn up for recording results of examinations. He makes the following suggestions as to the present public school system: The classes are too large; imbeciles and feeble-minded children belong to a state institution; the mentally deficient should be in separate classes, but in the same building, as they are naturally sensitive. These special classes should be small and the children should receive individual instruction, being returned to the regular class as soon as they are adequately improved. He suggests the enactment of a law to compel every child before being enrolled into a school to undergo a thorough physical examination and that accurate records be furnished to the bureau of education, especially regarding the eyes, ears and nasopharynx. Any defect seriously interfering with the child's chance of obtaining a normal education should be corrected before the child is enrolled.

11. **Roentgen-Ray Protection.**—Boggs draws the line between the man who says he has employed the Roentgen rays without using any of the ordinary precautions and has never seen any bad results, and the opinions of those who, having seen one or two undesirable results, assume that the Roentgen rays are dangerous in the hands of every one. Those desiring to take up roentgenology must prepare themselves as they would for any other specialty. He discusses the questions of limiting the area, measuring the dose and the length of exposure, and points out the necessity for the adoption of a standard "penetrometer" and the appointment of a committee for comparing standards. He emphasizes the importance of *x*-ray filters and of tube distance in protecting the skin when treating deep lesions. The susceptibility of various tissues to the Roentgen rays must be borne in mind. The stage of maturing attained by the cells has a decided influence on cellular reaction, which is greater the less mature the cells. Other functions and tissues affected by the rays are the glycogenic function of the liver, the reproductive organs, the cellular elements of the skin, the spleen, kidneys, thyroid and any organs made up largely of epithelial cells, also the vessels. Muscular and connective tissue, cartilage and bone are not easily influenced. He publishes a letter from Dr. Boyce relating a fatal case which demonstrates by the consequences of the delay in taking a Roentgen picture caused by the flood in Pittsburg, how easy it is to attribute to the ray conditions due to altogether different causes.

12. **Diet in Tuberculosis.**—White recounts the three considerations that have been presented to the profession, each of which has had an influence in determining the kind and quantity of food recommended for tuberculous patients. They are: 1. Certain articles of food have a specific action in destroying or antagonizing the *Bacillus tuberculosis*. 2. Nutrition should be improved and judiciously pushed to its utmost limitations. 3. The diet should be such as would reduce autointoxication to a minimum, and it should be free from the *Bacillus tuberculosis*. He considers these in detail and arrives at the conclusions that there is no article of diet or method of feeding that can be recommended as having a specific action in the treatment of tuberculosis. Since every patient with incipient tuberculosis has impaired digestion and malnutrition, forced feeding is entirely inconsistent, and when it is attempted serious consequences are likely to result. The treatment of digestive disorders in phthisical patients differs from that in other patients only in the urgency of the case. His observation confirms the doctrine that in the great majority of cases a restricted diet may be necessary for a short time in the beginning of the treatment, to rest the digestive organs and to facilitate the elimination of toxins. Amount of fever, muscular exercise, age, mental and other factors, have a bearing on diet. In regard to the entrance into the system through the alimentary canal of toxins and bacteria, laboratory authorities have blown hot and cold and hot again, but White considers that careful clinical observation will bear out the statement that autointoxication is a most pernicious factor in tuberculosis. He considers that the evidence adduced of late as to the nonidentity of bovine and human tuberculosis is largely negative and by no means conclusive, and that tuberculosis due to respiratory action is uncommon, while infection by the digestive tract is most common. The first line of action, therefore, is to keep the alimentary system in as healthy a condition as possible. The second, to avoid the ingestion of the bacillus, which is best accomplished by investigating the source of food supplies, especially milk.

13. **Anemia.**—Pope discusses the causes, classical symptoms and blood state of anemia and in regard to treatment considers deep inhalations of value. The diet should be based on the gastrointestinal conditions. In general, the maximum amount of a nutritious mixed diet should be administered. In putrefactive autointoxication, indicated by increase of sulphites and indican in the urine, the best corrective is sour milk, as suggested by Metchnikoff. Pope's experience with drugs has been disappointing. When he uses iron he employs Blaud's mass the peptonate of iron, or Basham's mixture. Arsenic increases the number of corpuscles, and if used should be administered hypodermically. He attaches most importance, however, to physio-therapeutic measures, massage, manual and mechanical, and vibrations. While electrotherapy has practically no direct effect on the anemia itself it is a valuable auxiliary from its tonic influence over the nervous and digestive systems. The galvanic and static currents are particularly available. Hydrotherapy is strongly recommended and the method of its application detailed. He insists on the internal use of water, but points out that the elimination of waste material is effected, not as generally supposed by a washing-out process, but by raising blood pressure and thus increasing renal activity. With regard to the electric light bath he is satisfied from long clinical experience that when followed by tonic percutient cold measures to promote a reaction it is "almost a panacea in the treatment of secondary anemia and chlorosis."

Lancet-Clinic, Cincinnati.

November 2.

17 Morphology of a Ciliate Infusorian. H. G. Graham, Bellwood, Neb.
18 •Difficulties in Diagnosis of Cancer of the Stomach. M. A. Brown, Cincinnati.
19 •Influence of Trauma in Localizing Infection in the Natural Mucous Cavities of the Body. B. Holmes, Chicago.

18. **Diagnosis of Cancer of the Stomach**—Brown reports two carefully reasoned cases which emphasize the fact that with all the advantages of laboratory findings as an aid or a check to careful clinical examinations, stomach conditions are by no means easy of diagnosis. In the first case the age, history, epigastric pain, absence of hydrochloric and presence of lactic acid, evacuation of blood with a stomach tube, and apparent constriction of the cardiac orifice, progressive emaciation and cachexia, apparent hour-glass constriction on *x*-ray examination, and secondary progressive anemia, notwithstanding the absence of tumor and coffee ground vomit, pointed clearly to gastric carcinoma, while the autopsy disclosed pulmonary tuberculosis, acute miliary tuberculosis, pulmonary edema, atrophic gastritis, chronic interstitial nephritis and ulcerated tuberculous enteritis. In the second case all the symptoms, the blood findings, the occult blood in the stools seemed to point to pernicious anemia; and the absence of any detectable tumor, coupled with the presence of free hydrochloric in the gastric contents, did not divert the consideration to gastric carcinoma. Yet at autopsy a scirrhous car-

cinoma was found on the posterior wall. Brown concludes by pointing out that valuable as the laboratory findings are as aids or checks, they are not infallible and can not replace a careful anamnesis and systematic physical examination.

19. **Trauma and Infection.**—Holmes emphasizes the influence of some traumatism, possibly long forgotten, in localizing an infection in the mucous cavities of the body, causing obstruction. He instances fractures of the base of the skull and injuries to the temporal bone followed by mastoid infection or trouble in the cranial sinuses. Gall bladder and appendix trouble are sometimes the result of traumatism. He has found evidence of injury not elicited by the history on two occasions when operating for nephropyelitis.

American Journal of the Medical Sciences, Philadelphia.

October.

20 *Etiology of Tuberculosis. M. P. Ravenel, Madison, Wis.
21 *Etiology of Certain Cases of Left-Sided Intra-Abdominal Suppuration—Acute Diverticulitis. G. E. Brewer, New York.
22 *Estimation of the Functional Power of the Cardiovascular Apparatus. R. C. Cabot and R. B. Bruce, Boston.
23 *Treatment of Illuminating Gas Poisoning by the Direct Transfusion of Blood. G. W. Crile and C. Lenhart, Cleveland.
24 *Examination of the Feces for Occult Blood, with Special Reference to the Value of the Benzidin Test. E. H. Goodman, Philadelphia.
25 *Factors Influencing the Early Diagnosis of Gastric Carcinoma. W. J. Stone, Toledo, Ohio.
26 *Case of Diffuse Dilatation of the Esophagus, without Anatomic Stenosis, Due to Chronic Cardiospasm. W. Lerche, St. Paul.
27 *Pancreatic Lithiasis, with Chronic Interstitial Pancreatitis, Followed by Diabetes Mellitus. A. D. Atkinson and J. L. Hirsh, Baltimore.
28 *Typhoid in the Aged. A. S. Hamilton, Minneapolis.
29 *Atrophy of the Parathyroid Glandules and Other Glandular Structures in Primary Infantile Atrophy. R. L. Thompson, St. Louis, Mo.
30 Tumor of the Mitral Valve. L. Blumgart, New York.
31 *Posterior Median Pleural Boundary, with Reference to Grocco's Sign. W. J. Calvert, Columbia, Mo.
32 Diagnosis of Cerebrospinal Meningitis by Cultures from the Blood. J. M. Birnie and M. T. Smith, Philadelphia.

20. **Etiology of Tuberculosis.**—Ravenel, in a thorough article, arrives at the following general conclusions: 1. The alimentary tract is a frequent portal of entry for the tubercle bacillus. 2. The tubercle bacillus is able to pass through the intact mucous membrane of the alimentary tract without producing a lesion at the point of entrance. This takes place most readily during the digestion of fats. 3. The bacilli pass with the chyle through the lacteals and thoracic duct into the blood, which conveys them to the lungs, where they are retained largely by the filtering action of the tissues. 4. Infection through the alimentary tract is especially frequent in children. 5. Milk from tuberculous cows is the source of infection in many cases. Our present knowledge does not enable us to state the exact proportion of cases of tuberculosis due to this cause, but it is probably considerable. 6. Tuberculosis can be communicated by contact, such as kissing, soiled hands, accidental injuries in postmortem work, or in cleansing vessels used by consumptives. These modes of infection play a comparatively small part in the dissemination of the disease.

21.—Abstracted in THE JOURNAL, June 8, 1907, page 1984.

22. **Functional Power of the Cardiovascular Apparatus.**—Cabot and Bruce, in the preliminary report on the value of measures aiming to estimate as accurately as possible the functional power of the cardiovascular apparatus, namely, effects of changed position, Herz' test, Levy's test, Gräupner's test, sum up their conclusions as follows: For diagosis, prognosis and treatment it is important to supplement the current methods of cardiac examination by others planned to measure the functional capacity of the cardiovascular apparatus. Second, several such methods have recently been suggested by Germans. Third, our experience with these methods, and especially with that of Gräupner, leads us to hope that ground has been gained in the direction of functional cardiac diagnosis.

23. **Poisoning by Illuminating Gas.**—Crile and Lenhart have compared various forms of treatment in poisoning by illuminating gas in animals, undertaken because a review of previous experimental work showed it to be faulty and inefficient, while the clinical evidence was so variable as to give ground for hoping that a newer method of blood transfusion would prove valuable. They conclude that blood transfusion seems to be of greater therapeutic worth than the other measures considered. For the animal to recover, it is necessary to begin transfusing immediately the heart stops beating. Transfusion is not efficacious after the heart stops finally, as, for example, is adrenalin in chloroform death.

24.—This article was discussed editorially in THE JOURNAL, November 9, page 1611.

25. **Early Diagnosis of Gastric Carcinoma.**—Stone gives a good review of our present knowledge on the subject.

26. **Dilatation of the Esophagus.**—Lerche reviews the literature, reports two cases of his own, and describes and illustrates an apparatus for dilating the cardia gradually. Dilatation, if forcibly performed, is dangerous.

27. **Pancreatic Lithiasis.**—Atkinson and Hirsh report a case of pancreatic lithiasis with chronic interstitial pancreatitis followed by diabetes mellitus, which they have been able to follow more or less throughout its entire course and finally to observe at autopsy. From the study of this one case they are inclined to the view that sugar does not appear in the urine until the islands of Langerhans become involved in any disease of the pancreas.

28. **Typhoid in the Aged.**—Hamilton reviews the literature of typhoid in patients over 50 years of age and adds the results of a study of a typhoid epidemic, many of the victims being aged persons, which occurred at the Hospital for the Insane at Independence, Iowa. He concludes from his combined investigations that the immunity to typhoid conferred by advancing age is less than is generally supposed. This may be explained, perhaps, by the variations from the classical symptomatology displayed by most of the patients, so that in the past many cases of typhoid in the aged may have missed recognition. In a general way, it may be said that the signs in the aged differ from those in younger people in that those on which we ordinarily depend largely for diagnosis—a certain type of fever, rose spots, enlargement of the spleen and nosebleed—are frequently absent, whereas various misleading complications are likely to be present.

29. **The Parathyroid Glandules in Primary Infantile Atrophy.**—Thompson reports a close research on the condition of the parathyroid in a case of primary infantile atrophy, and states that in primary infantile atrophy the parathyroid glandules show changes which may be degenerative in type, but which are, for the most part, progressive, and consist in replacement of a varying amount of the gland parenchyma by connective tissue stroma. These changes are similar in nature to those which are constantly present in the thymus gland in this disease. Moreover, these progressive changes are present in other ductless glands, and become especially apparent in long-standing cases of the disease, as evidenced in the extreme atrophy of the thyroid and medullary suprarenal in the cases here described. He does not imply that these various glands are primarily at fault in infantile atrophy, but rather emphasizes the fact that failures of assimilation in this disease lead to wider changes than simple wasting of fat and muscle. The fatal result in this disease is more easily understood when the physician realizes the constant involvement of structures that elaborate substances which are so essential to health, or even life itself, as are here found.

31. **The Posterior Median Pleural Boundary and Grocco's Sign.**—Eleven normal adults, one newborn infant, and one case of right-sided pleural effusion have been studied on the cadaver by Calvert. He gives the results in schematic representation, of the pleural boundaries in relation to the vertebral column and also in transverse section. In general he finds that the right pleural border passes in front of the vertebral column at varying distances often to the midline. The lower half of the line was further to the left than the upper. The left pleura did not extend on to the column to the same degree as the right above and below; in the middle it did not touch the column.

American Medicine, Philadelphia.

October.

33 *Effect of Some Diseases of Childhood on Mental Development. H. O. Collins, Dayton.
34 *Gastric Ulcer Complicated with Symptoms of Cholelithiasis. J. A. Lichty, Pittsburg.

35 *Flatfoot; A Mechanical Problem Solved by an Ideal Plate, Simply Constructed and Allowing Natural Motion to the Foot. J. E. Tuckerman, Cleveland.
36 *Radiotherapy in the Treatment of Malignancy. G. C. Johnston, Pittsburg.
37 *What Is the Primary Cause of Mal-Legislation and Non-Legislation with Regard to Medical Matters? T. H. Shastid, Marion, Ill.
38 Burette for Measuring Stock Solutions. A. L. Benedict, Buffalo.
39 *Mosquitoes and Their Relation to Leprosy in Hawaii. E. S. Goodhue, Holuala, Hawaii.

33. **Diseases of Childhood and Mental Development.**—Collins says that the gradual opening up of the intellectual faculties of a child follows the order of their original advent in the history of the race. Whether Weismann's view, that acquired characteristics can not be transmitted, or the opposite view, held by Darwin, Locke and Lamarck, be correct, certain it is that the mental powers of the parents are really transmitted, more or less diminished in force or modified by conflicting heritage or subsequent environment. There is, however, always a tendency to diverge in the direction of that portion of the general average of the race which forms part of the child's environment. A close study of the nutrition of the fetus, *in utero*, would help to solve problems of childhood mentality, for all mentality has a physical basis. If there is no insanity or idiocy back of the inheritance there is sure to be syphilis, tuberculosis, alcoholism or some of the many nervous troubles that act as predisposing factors of mental enfeeblement. But running all through will be found a general lowering of vitality and interference with metabolism, producing not only flabby muscle and weak heart, but also weak brain cells. During earlier years the mind develops along certain well-determined lines, but with the onset of puberty a gradual change in character begins to manifest itself; it is the period of growth of the sexual character and carries with it all the instability and change of mood naturally to be expected under the dominance of erotic development. At this time the greatest care is needed in the mental training of the child and a watchfulness against undue excitement or emotional exaltation. The study of music, particularly, he asserts, calls for judicious control. There is a close relation between puberty and hysteria. Impulsive insanity, or imperative concepts in which fixed ideas recur with a predominating force beyond the control of the victim, often appear first during puberty. In their simplest expression they may be instanced by the ever recurring strains of a popular air, or the vivid reproduction of the sensations of some event, pleasant or the reverse. The appearance of any form of imperative conception or obsession during puberty is of grave importance. Moral perversions are common, and, on the other hand, religious exaltation frequently occurs at this period. The sick child often shows the first symptoms of its illness in some mental change. Unusual irritability is often associated with approaching headache, gouty disposition, organic heart disease, cholera infantum and the acute exanthems, and, with gastrointestinal symptoms, headache, nausea, and irregular temperature, meningeal trouble. Collins considers in detail the mental characters of hydrocephalus, cerebrospinal meningitis, infantile lithemia, convulsive tic, and diseased conditions in the respiratory apparatus, particularly the nose and nasopharynx. A slight degree of autointoxication must be recognized in the mental dulness attendant on absorption from the nasal and accessory sinus mucous membranes. Particular attention is necessary to defective conditions of the sense-conveying organs, through which alone can anything enter the mind. The aurist, the oculist and the dentist all have their respective parts to play in different cases of backward mentality in childhood.

34. **Gastric Ulcer.**—Lichty reports three cases of gastric ulcer showing marked symptoms of cholelithiasis, which indicate how confusing the complications of gastric ulcer may be. The conclusions he draws are: 1. The diagnosis of uncomplicated gastric ulcer should be made without difficulty. 2. When complications exist, it may be impossible to form an exact opinion of the pathologic condition in this region of the abdominal cavity before a laparotomy is done. 3. A careful and methodical anamnesis in these cases is of the utmost importance.

35. **Flatfoot.**—Tuckermann describes a self-retaining plate supporting the foot from below, while allowing by its shape, tapered ends, elasticity and accurate fit the necessary condition for ultimate recovery to natural action of the foot—a spring tread, followed by the grasping of the ground with the toes as the body weight is carried over them. The best material is German silver, the best method of ordering a plate from tracings of the bearing surfaces of the foot and not from casts, or other time-consuming and inaccurate measures. Corns, bunions, painful calluses, diabetic ulcers, painful toe, hammer toe, backache and various kinds of "rheumatism" have been relieved by means of such plates. The article is freely illustrated.

36. **Radiotherapy in Malignancy.**—Johnston considers the results of Roentgen-ray treatment in malignant and especially in inoperable cases in which much can be accomplished by the combination of surgery and the Roentgen ray. In internal malignant growths nothing can as yet be promised, beyond probable relief of pain and some temporary inhibition of the growth. He recounts the arguments against its use and asserts that in every case of carcinoma the patient must be offered or refused the benefit, real or imaginary, of radiotherapy in graduated doses at frequent intervals, and the direct responsibility of the decision rests on the attending physician. Success or failure is directly dependent on the skill and experience of the radiologist.

37. **Legislation in Medicine.**—Shastid stigmatizes legislation in this country concerning medical affairs as deplorably defective, and ascribes the fact to the ridiculous character, or the total absence, of instruction in legal medicine given in American schools of law. Out of 57 law colleges only seven profess to give a course in legal medicine, and even in some of these attendance is not obligatory. The deplorable condition of medical jurisprudence as taught in our schools of medicine is also to blame. It is often chopped up and passed around between different professors, or a lawyer is called on to deliver a course of three or four lectures. When physicians themselves so little understand the importance of legal medicine they can not expect lawyers to pay much attention to it. Shastid would have the teacher of medical jurisprudence in either law or medical school, a graduate in both medicine and law. The most important result to be attained from the study of legal medicine is not the power of legal vision, or that of medical vision, but rather the power of stereoscopic vision, the faculty of medical "jurisprudential" eyesight.

39. **Leprosy.**—E. S. Goodhue recounts W. J. Goodhue's work in the discovery of the *Bacillus lepræ* in the female *Culex pungens* and the common bedbug, *Cimex lectularius*. A natural immunity exists which has been comparatively little studied. The contagiousness of leprosy is well established, yet, as one out of many instances, a Hawaiian woman lived with three different leper husbands till each died of the disease and she herself escaped infection, dying many years after "clean." He rejects the idea of a long incubative period, thinking it more likely that the sudden giving way of a hitherto existing immunity before slight contact is the true explanation.

Interstate Medical Journal, St. Louis, Mo.

October.

40 *Vision and Senility. G. M. Gould, Philadelphia.
41 Venereal Diseases—Shall the Innocent Suffer for the Guilty? R. Amory, Boston.
42 *Value of Examination of the Blood in the Diagnosis of Chronic Lead Poisoning. C. S. Neer, Springfield, Mo.

40. **Vision and Senility.**—Gould says that the habit and fact of over-prolonged senility is almost wholly due to ocular defects and failures. Seeing is largely a psychic fact, a perceptional education with some aid from the eyeballs and in the case of those who see poorly well supplemented by memory. Before spectacle lenses were known many eye diseases cooperated to produce that renunciation of labor and the social functions called old age. The habit of giving up energizing work and social functions was established in countless past ages, when the eye became unfitted to guide such work. Thus was formed the custom or habit of senility, the renunciation of the youthful and virile offices, and the acceptance of exclusion, of resignation, of waiting for the end. Old age, "the disease of Anno Domini," should henceforth be progressively done

away with. It should begin not earlier than 70 or 80 surely, and should be limited to the last year or two of life

42. **Blood Examination in Lead Poisoning.**—Neer directs attention to a change in the blood which, he says, is all but pathognomic of chronic lead poisoning, namely, characteristic alterations in the red cells of the blood. These changes described by Grawitz and Frey have not received the general attention they deserve. They are of two kinds: 1, Granular, or basophilic degeneration, and 2, polychromatophilia. The granular degeneration may be the first evidence of saturnine intoxication, and it is recommended that workers in lead should have their blood examined occasionally as a prophylactic measure. Polychromatophilia is observed in lead poisoning with as great constancy as in granular degeneration, but is found also in other severe anemias. To show granular degeneration dry and fix the smear in absolute alcohol and stain with Loffler's methylene blue. Wright's stain shows the polychromatophilia splendidly and the granular degeneration fairly well. Neer's experience includes seven cases, of which he reports three. These were taken consecutively and granular degeneration and polychromatophilia were found in all. He suggests as another group of cases to which this method may be applied those in which plumbism develops from unusual or obscure causes.

Buffalo Medical Journal.

October.

43 *Serious Neglect of Scientific Obstetrics: The Remedy. P. W. Van Peyma, Buffalo, N. Y.
44 *Infection with an Organism of the Actinomyces Group: Recovery. F. J. Parmenter, Buffalo, N. Y.

43. **Neglect of Scientific Obstetrics.**—Van Peyma urges the importance of restoring the clinical teaching of obstetrics which was introduced into Buffalo nearly 50 years ago but abandoned through prejudice by the institution of public labor clinics. The practice of obstetrics is at a very low ebb, which fact he attributes mainly to the lack of clinical teaching.

44. **Actinomycotic Infections.**—The treatment of Parmenter's case of actinomycotic infection of the cecal region was local and general. Locally granulations were removed by the actual cautery. A 1 per cent. solution of copper sulphate and a solution of iodin of equal strength were injected into the mass on alternate days. Internally potassium iodid was given, beginning with 15 grains before meals and the dose was gradually increased to 90 grains, making in all 270 grains a day. A quarter of a grain of copper sulphate was given internally in a capsule and the dose gradually increased to one-third of a grain daily after meals.

Iowa Medical Journal, Des Moines.

October 15.

45 *New Liver Suture. V. B. Knott, Sioux City.
46 Gall-Bladder Surgery. A. L. Hagebœck, Davenport.
47 Cholecystectomy. D. MacRae, Council Bluffs.
48 Sanitary Science and Hygiene. T. A. Hobson, Parkersburg.
49 Pseudomembranous Inflammations of the Throat. H. Albert, Iowa City.
50 The Great White Plague and the Greater Black Plague: Some Practical Questions for the Medical Profession. E. L. Stevens, Des Moines.
51 Infant Feeding. H. J. Brackney, Sheldon.
52 Roentgen-Ray in Accessory Sinus Disease. H. G. Langworthy, Dubuque.
53 Circulation of the Intestinal Tract. B. Robinson, Chicago.
54 Medical and Surgical Progress. G. Cullen, Des Moines.

45. **A New Liver Suture.**—Knott's suture permits the coaptation of a wound of the liver substance, at the same time controlling the hemorrhage without the necessity for packing; it also permits the resection of large or small areas of tissue for the radical extirpation of liver tumors. Parallel with the wound in the liver or with the area to be excised, and about one-half inch from its edge on either side, insert deeply through the liver substance by means of a large, round, blunt needle a strand of No. 3 catgut. This should enter the liver tissue about one inch beyond the edge of the wound or proposed wound, run deeply through the liver substance and emerge the same distance from the opposite end of the wound. The ends of these catgut strands are then fastened, drawing them up snugly and tightly. To either end of both strands tie a small ordinary skein of catgut, which, presenting a broad surface against the liver tissue, prevents the indrawing of the suture ends. Transverse interrupted sutures of No. 3 catgut are then introduced by means of a smaller round blunt needle in such a manner that they engage on either side of the wound the long buried strand of catgut. These may be tied as rapidly as introduced and exerting their traction on the long buried suture may be tied snugly ensuring hemostasis and coaptation without the danger of their cutting out. When it is desired to remove a portion of the liver tissue, carrying with it a tumor, this may be done by excising between the long buried sutures a wedge-shaped ellipse of liver substance and introducing the transverse sutures as above described. Hemorrhage during this procedure may be controlled either by manual pressure or by elastic ligature until the transverse sutures are tied, when it will immediately cease. Large veins presenting along the cut surface may be tied.

Indiana Medical Journal, Indianapolis.

October.

55 Puerperal Infection. C. C. Crum, Jeffersonville.
56 *Hypertrophy of the Faucial Tonsil. L. D. Brose, Evansville.

56. **Hypertrophy of the Faucial Tonsil.**—Brose reviews the opposing technics of Germany and United States in regard to removal of the tonsils. He prefers to free the tonsil from attachment to the faucial pillars with an angular knife and then to use the tonsillotome if the patient is under twelve and the hypertrophied mass not sclerotic, drawing the mass well into the cutting ring with a forceps. In older patients he substitutes the galvanocautery snare with platinum wire at a dull red heat, as being less likely to result in hemorrhage than any other method. Brose emphasizes the fact that because of the fibrous consistence of the tonsil and its proneness to bleed severely after the removal in the case of adults, it is better never to operate without telling patients of the possible danger of hemorrhage, which, though not likely to be fatal, is still probable.

The Wisconsin Medical Journal, Milwaukee.

October.

57 *Intussusception in the Adult, with Report of a Case. C. J. Combs, Oshkosh.
58 *Headache. L. F. Germain, Milwaukee.
59 *Headache from the Point of View of the Neurologist. B. M. Caples, Waukesha.
60 Ocular Headache. H. V. Würdemann, Milwaukee.
61 *Headache from the Point of View of the Nose and Throat Specialist. C. D. Conkey, Superior.
62 *Headache of Optic Origin. H. B. Hitz, Milwaukee.
63 *Venereal Disease and Marriage. D. J. Hayes, Milwaukee.

57. Abstracted in THE JOURNAL, Aug. 31, 1907, page 793.

58, 59, 61, 62. These articles were abstracted in THE JOURNAL, Aug. 31, 1907, pages 793 and 794.

63. Abstracted in THE JOURNAL, Aug. 31, 1907, page 793.

Northwest Medicine, Seattle.

October.

64 *Moral Qualifications of the Physician. J. H. Lyons, Seattle.
65 *Criminal Abortion. M. Russell, Seattle.
66 *Plea for the Protection of the Unborn. C. N. Suttner, Walla Walla.

64. Abstracted in THE JOURNAL, Oct. 12, 1907, page 1303.

65. Abstracted in THE JOURNAL, Oct. 12, 1907, page 1304.

66. Abstracted in THE JOURNAL, Oct. 12, 1907, page 1304.

The Medical Fortnightly, St. Louis.

October 10.

67 *Neuroses of the Bladder. R. C. M. Lewis, Marion.
68 Cases of Reinfection with Syphilis. A. U. Williams, Hot Springs.
69 *Frequent Interdependence of Dislocated Kidney, Gall-Bladder Trouble and Appendicitis. E. Harlan, Cincinnati.

67. Abstracted in THE JOURNAL, Oct. 26, 1907, page 1468.

69. Abstracted in THE JOURNAL, Oct. 26, 1907, page 1467.

The Journal of the Arkansas Medical Society, Little Rock.

September.

70 *A New Local Anesthetic. H. Thibault, Scotts.
71 Anesthesia. C. P. Meriwether, Little Rock.
72 Case of Fatal Hysteria. H. H. Canfield, Siloam Springs.
73 *Specific and Associated Lesions in Chronic Interstitial Nephritis. A. Watkins, Little Rock.
74 Amebiasis. J. L. Jelks, Memphis, Tenn.
75 Seborrheic Dermatitis. J. T. Clegg, Siloam Springs.
76 Sarcoma of Ileocecum. T. E. Rhines, Thornton.

70. **New Local Anesthetic.**—Thibault speaks highly of the value of quinin infiltration as a local anesthetic. He describes

an interesting series of personal experiments on himself, which arose out of his use of quinin hypodermically for the cure of malaria. After making several injections with first a 4 and then a 2 per cent. solution of quinin and urea bichlorid, he answered the objections that the results were an instance of pressure anesthesia, by infiltrating spots on each side half way between the umbilicus and ensiform process, two inches from the median line; on the right side using the 2 per cent. quinin and urea injection and on the left side a normal saline solution. At the end of five minutes there was no sensation in either place, but while sensation quickly returned over the area infiltrated with the saline solution, the anesthesia on the right side was tested at intervals of one hour for six hours, without producing any pain. He has since tried all the soluble salts of quinin and found them to be good local anesthetics when injected in 1.5 per cent or stronger solution. He has used this local anesthetic in amputation of a finger, removal of a large fatty tumor half a pound in weight, incision of a large carbuncle, divulsion of the sphincter for the removal of a fish bone. He cites Dr. Snodgrass as confirming his results from personal experience and concludes his paper as follows:

1. It is efficient in 1 to 2 per cent. solutions.
2. Healing is as rapid as with any other local anesthetic.
3. It is safer than any other local anesthetic of anything like equal efficiency.
4. Solutions can be kept in stock and boiled repeatedly without deteriorating.
5. It is much less expensive than any of the more dangerous drugs used for local anesthesia.
6. It is neither patented nor proprietary.
7. It can be obtained nearly anywhere.
8. It is efficient when applied in 15 to 20 per cent. solutions to raw surfaces on cotton pledgets.
9. The anesthesia lasts from one to six hours.

73. **Chronic Interstitial Nephritis.**—Watkins considers chronic nephritis under three types, and describes four cases with autopsy. He emphasizes the fact that there may be primary chronic interstitial nephritis, that is, one which is not secondary to the diffused inflammation; and further, that the nephritis is but one lesion of a generalized process of fibrosis which presents the features of Bright's disease. The numerous pathologic changes that occur in chronic nephritis should stimulate physicians to apply their knowledge practically to the treatment of a general disease instead of a local one.

Western Medical Review, Omaha.

October.

77 Opsonic Index and Vaccine Therapy. H. Albert, Iowa City.
78 Rupture of the Uterus, with Report of Cases and Special Reference to Treatment. O. Grothan, Kearney.
79 Retrobulbar Orbital Cyst Treated by Krönlein's Operation and the Application of Carbolic Acid. H. Gifford, Omaha.
80 *Headache. A. D. Dunn, Omaha.
81 Physical and Sexual Frailty of the Average American Woman. M. Mesroplan, Edgar, Neb.
82 Hernia—Principles Underlying Treatment, Reference to Strangulation to Treatment in the Extremes of Life, Slipped Hernia and Hernia of the Bladder. C. C. Allison, Omaha.
83 The Orthopedic Shoe. H. W. Orr, Lincoln.

80. **Headache.**—Dunn recommends the following routine investigation in the case of persistent pain in the head of uncertain causation:

1. Examination of the urine is imperative. The oculist should not be permitted the privilege of diagnosing so many cases of Brights' disease by the albuminuric retinitis route.
2. The blood pressure and pulse tension should be studied. The Riva-Rocci apparatus—Cook's modification—is sufficiently accurate for general purposes.
3. A careful history of the individual's past and present life and habits should be obtained to the end of discovering causative factors. This is especially desirable in neurasthenics, for the removal of the exciting cause brings relief.
4. In young girls and in anemic individuals, a blood examination often solves the difficulty.
5. The ophthalmoscope will frequently clear obscure cases, or suggest the investigative lines by which they may be cleared.
6. The possibility of errors of refraction should always be kept in the foreground.
7. Evidences of acetonuria and intestinal putrefaction should be sought after.
8. Examination of the pulse frequency is of value. Bradycardia in tumor, hydrocephalus, and meningitis, is of much worth.

The Ohio State Medical Journal, Columbus.

October.

84 Goiter: Its Surgical Treatment. C. H. Mayo, Rochester, Minn.
85 *Constitutionality of the Recognition of Sectarian Medicine by Statutory Law. A. Ravogli, Cincinnati.
86 Importance of Early Diagnosis and Treatment of Carcinoma of the Uterus. X. O. Werder, Pittsburg, Pa.

85. **Sectarian Medicine.**—Ravogli considers the origin and development of the state regulation of the practice of medicine from the earliest times and shows how at different periods, different schools dominated medical practice. The recognition of the eclectic and homeopathic schools is constitutional, because all accept the rules of the board, bringing the equipment of their colleges up to the standard of requirements, and all subject their candidates to the same examinations, save in the mere matter of application in therapeutics. In the case of osteopathy, however, a discrimination has been made in their favor in Ohio, by allowing them to practice medicine by passing an examination in four subjects only, and under a lesser period of study, thus giving them privileges which are denied to others.

Kentucky Medical Journal, Bowling Green.

October.

87 *What Should Be the Relations of Pharmacists and Physicians? J. N. McCormack, Bowling Green.
88 *Treatment of Acute Diffuse Peritonitis. A. D. Willmoth, Louisville.
89 Insanity with a Special View to Diagnosis. G. M. Chinn, Frankfort.
90 Case of Measles in Pregnancy. H. D. Rodman, Bardstown.
91 Case of Concussion of the Brain. H. C. Jasper, Richmond.
92 The Tic Douloureux of Epileptiform Neuralgia. T. J. Shoemaker, Morganfield.

87.—This article appeared in THE JOURNAL, Oct. 5, 1907, page 1163.

88. **Acute Diffuse Peritonitis.**—Willmoth considers the subject of acute diffuse peritonitis under two heads: 1, The means by which the peritoneum may become infected, and, 2, the mode in which it cares for itself when it does become infected. In regard to the first he names extension from the appendix, perforation of gastric or intestinal ulcers, and ruptures of cysts, etc. The passage of a micro-organism from an inflamed but not perforated or hollow viscus, cyst or abscess. Indirect infection of blood, extravasated to a degree beyond the absorptive power of the membrane, and direct infection by way of the blood stream, as in septicemia. He traces the second to the five important functions of the peritoneum, circulation, absorption, cohesive and adhesive property, protective rôle, and supplemental functions, that of circulation being the first in importance. Another important factor for consideration is the character of the micro-organism at work. He considers Fowler's postural postoperative treatment and Murphy's method, which latter he describes in some detail.

The West Virginia Medical Journal, Wheeling.

October.

93 *Cardiac Neuroses. R. W. Fisher, Morgantown.
94 Pennsylvania and West Virginia Medical Associations—A Comparison. C. H. Maxwell, Morgantown.
95 The Reciprocal Relations Existing Between the Older and the Younger Physicians. J. C. Irons, Elkins.
96 Medical Ethics. H. S. Castleman, Martinsburg.
97 Treatment of Rectal Diseases by the General Practitioner. I. C. Young, St. Louis.

93. **Cardiac Neurosis.**—Fisher gives a résumé of our present knowledge of tachycardia, palpitation, bradycardia and arrhythmia.

The Laryngoscope, St. Louis.

September.

98 Eustachian Tubes in Infants and Young Children; Anatomic Differences as Compared with the Adult Type; Bearing on Tympanic Disease. P. D. Kerrison, New York.
99 Review of Methods for Removal of Adenoids, with Description of a Method which is Thorough, Rapid and Safe. G. L. Richards, Fall River, Mass.
100 Case of Extradural Abscess; Septic Thrombosis of Lateral Sinus, Complicated by Pregnancy. Operation, with Recovery. G. L. Tober, Jr., Boston.
101 Every-Day Causes of Voice Deterioration. P. Fridenberg, New York.
102 Case of Bilateral Abductor Paralysis of the Larynx. C. H. Knight, New York.
103 Case of Epithelioma of the Larynx; Removal by Thyrotomy. H. L. Swain, New Haven, Conn.
104 Physiognomy and Its Relation to the Size and Extent of the Sinus Frontalis. H. J. H. Hoeve, Des Moines, Iowa.
105 Case of Closed Sinusitis of the Ethmoid Labyrinth, with Exophthalmos. H. Kahn and M. Frank, Chicago.
106 Alveolar Route of Operating on the Maxillary Sinus. M. Black, Denver, Colo.
107 Suppuration in the Ethmoid and Sphenoid Sinuses with Paralysis of the Third Nerve. Case Reports. J. A. Thompson, Cincinnati.
108 Relation of Tonsillitis to Rheumatism. E. F. Ingals, Chicago.
109 Mouth, Nose and Throat in Relation to Stomach and Intestine. O. J. Stein, Chicago.
110 Nasal Obstruction. A. E. Prince, Springfield, Ill.
111 Peritonsillar Abscess. C. M. Robertson, Chicago.
112 Treatment of Atrophic Rhinitis with Strong Solutions of Nitrate of Silver with Massage. G. F. Keiper, Lafayette, Ind.

Detroit Medical Journal.

September.

113 Nutrition. A. M. Campbell, Grand Rapids, Mich.
114 Relationship of Syphilis to Paretic Dementia and Tabes Dorsalis. A. W. Ives, Detroit.
115 Migraine. G. W. Spohn, Elkhart, Ind.

Milwaukee Medical Journal.

September.

116 Tonsillitis—Acute Articular Rheumatism—Treatment. G. F. Zaun, Milwaukee.
117 The Nasal Tip as Factor in Marring Appearance of Face. C. C. Miller, Chicago.
118 Atropin. J. Burke, Manitowoc.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

October 19.

1 *Inebriety: Its Causation and Control. R. W. Branthwaite.
2 Choice of a Medical Career—Medical Ethics and Etiquette. J. Craig.
3 The Calmette Serum Reaction in Ophthalmology. S. Stephenson.
4 Case Showing the Stokes-Adams Phenomena. C. Beards.
5 *Two Cases of Pernicious Anemia with Unusual Features. J. Fortune.
6 Case of Splenomedullary Leukemia. J. D. Shapland.
7 A Forgotten Swab: Another Warning. G. T. Gifford.
8 *President's Address in the Section of Tropical Medicine, British Medical Association. J. Cantlie.
9 *Antimalarial Sanitation. W. J. R. Simpson.
10 *Malaria Prevention in Uncultivated Districts. H. Ziemann.
11 *Diabetes in the Tropics. R. H. Charles.
12 Id. R. K. C. Bose.
13 Id. C. L. Bose.
14 Id. S. Chakravarti.
15 Id. R. D. Roy.
16 Id. F. M. Sandwith.
17 Phleboliths and the Roentgen Rays. T. G. Beckett.
18 Repeated Rupture of the Tunica Vaginalis. W. G. Nash.

1. **Inebriety.**—Branthwaite divides alcohol takers into (a) strictly moderate, (b) careless and occasionally excessive drinkers, and (c) habitual drunkards. Eliminating the total abstainer and moderate drinker from consideration, the occasionally excessive drinker differs from the habitual drunkard, in the fact that he retains the power to remain sober, if he desires to exercise it. He is still on the right side of the line, and may be eliminated from consideration for present purposes. Coming to the habitual drunkard, Branthwaite defines him as: "A man who may or may not desire to live soberly, but in any case can not unless and until some change takes place in his mental state." Branthwaite is more and more convinced that the real condition we have to study, the trouble we have to fight, and the source of all the mischief, is inherent defect in mental mechanism, generally congenital, sometimes more or less acquired. Alcohol, far from being the chief cause of habitual inebriety, is merely the medium which brings into prominence certain defects which might otherwise have remained hidden but for its exposing or developing influence. In the absence of alcohol the same persons, instead of meriting the term "inebriate," would have proved unreliable, as "ne'er-do-weels," profligates, persons of lax morality, excitable or abnormally passionate individuals, melancholics or eccentrics. He thinks that sufficient credit has never been given to the honesty of the inebriate's fight against inclination, or the inherent weakness of his resisting power. Branthwaite is skeptical as to the probability of any normally constituted individual becoming a habitual drunkard, even if he permits himself to indulge occasionally in a fair measure of careless drinking, without the intervention of nerve shock or other influence sufficiently potent to disturb the equilibrium of the nervous and mental mechanism. The author then considers the present facilities for inebriate study under the Habitual Drunkards Act of 1879 and the Inebriates Act of 1898, and analyzes the information concerning the mental state of 2,277 individuals sentenced previous to Dec. 31, 1906. This analysis shows: Insane, 51; very defective, 315; defective, 1,060, and of average mental capacity, 851. The mental defectives again he subdivides into those with (1) impaired development of moral sense, (2) imperfect control over impulse, and (3) defective power of judgment. He considers it practically impossible to do other than include all persons who merit inclusion in one of the first three main groups as practically hopeless from a reformation standpoint. Even the fourth group can not be considered as composed entirely of reformable individuals, for he has rarely been brought into close contact with inebriates, irrespective of class or status, inside or outside of institutions, without being able to discover evidence of one or other of the three forms of mental deficiency, in some slight degree at any rate. He goes at length into the predisposing and exciting causes of mental defect in habitual drunkards and the method of treatment and control, in which he emphasizes the following points: 1. The necessity for greater attention to neurotic and psychopathic indications, and, 2, the necessity for an early recognition of these conditions, with a view to the timely exercise of effective control in persons who can not possibly be benefited by milder methods. He discusses the unsatisfactory nature of existing facilities for dealing with drunkards, and regrets that it is still easy to send habitual drunkards to prison, and exceedingly difficult to send them to reformatories. Until this condition is reversed, full advantage can not be obtained from any legislative acts. He concludes by outlining work for the Society for the Study of Inebriety.

5. **Pernicious Anemia with Unusual Features.**—The unusual features in Fortune's case were: 1, The gall bladder was empty; 2, the occurrence of pernicious anemia in epilepsy, and its beneficial effects as regard the number of paroxysms.

8. **Introductory Address.**—Cantlie dwells on the increasing importance of the study of protozoa in relation to disease, and the rapid increase of pathologic knowledge in specialized directions which will soon render necessary lectureships in many special departments. He traces the general loathing with which mankind regards many small insects and vermin as due to hereditary instinct of danger. On the other hand, the proximity of other animals to our dwellings may possibly possess hygienic virtue, either directly or indirectly. We are now paying attention for the first time to their evil influences. The time may come when we shall look for transmitters of health-giving properties. He considers recent developments in tropical pathology, the *Micrococcus melitensis*, the work of Braddon on beriberi, the International Sleeping Sickness Commission, trypanosomiasis, Sambon's classification of the hemoprotozoa, the schistosomes and the guinea worm.

9. **Antimalarial Sanitation.**—Simpson discusses in some detail the problems of antimalarial sanitation, and refers to the conditions at Port Swettenham, in the Malay Free States, which, though less than a quarter of a mile from malaria-bearing marshes, has been rendered free from malaria. He also states that the health officer of Port Said has practically freed that town from mosquitoes by periodically pouring petroleum down the closets leading to cesspools and by filling up underground cellars flooded with subsoil water or sewage.

10. **Malaria Prophylaxis.**—Ziemann advises systematic administration of quinin to those infected with malaria; destruction and extirpation of mosquitoes; protection against the bites of malaria-bearing mosquitoes, and improvement of the resistance power by attention to personal hygiene. It is useless, he states, to give quinin every seven or eight days, as the drug is excreted from the body in four days. The quinin should be kept constantly circulating in the blood. He prescribes 1 gram (15 grains) every four days, with 5 drops of hydrochloric acid in a glass of water. In addition, he gives 1 gram (15 grains) of potassium bromid on the appearance of quinism. If this treatment can not be endured, he orders 1 gram (15 grains) of quinin ethyl carbonate; failing this, 0.5 gram (7½ grains) of this drug. When quinin can not be tolerated at all, he injects into the glutei 1 gram (15 grains) of quinin bihydrochlorid in sterilized solution in the proportion of one to two of water. He also discusses the mechanical means of prophylaxis, especially in the tropics.

11. **Diabetes in the Tropics.**—Charles states that diabetes is very prevalent among Hindu races and is considerably on the increase. Dyspepsia, he states, plays a great part in its causation. There are several peculiarities in type: The patient is rarely emaciated; his appetitite is less ravenous than in the European type of the disease; his skin may be moist; sugar is frequently absent from the urine and albumin commonly present, and the latter is usually of less moment in

the absence of casts than is the case with Europeans. Loss of virile power is a premonitory symptom; loss of knee jerk is early; coma is more frequent than in Europe. The author discusses this disease especially in relation to the various Indian peoples. He is of opinion that the diabetes of the West is the same as the diabetes of the East, with certain of its symptoms modified owing to radical peculiarities, food habits, and the varying of the climatic conditions.

Lancet, London.

October 19.

19 *Air, Water and Situation. N. Moore.
20 *Vital Properties of Milk. M. Coplans.
21 Frontal Band Alopecia as a Possible Sign of Exophthalmic Goiter and Associated Condition. D. Walsh.
22 Case of Intraparietal Hernia with Very Small Peritoneal Opening, Giving Rise to Severe Abdominal Pain. J. A. C. Macewen.
23 Multiple Fibromyxomata of the Choroid Plexus. M. B. Dobson.
24 Case of Acute Intestinal Obstruction. H. J. Clarke.
25 Vicious Circle After Gastrojejunostomy; Subsequent Lateral Anastomosis; Recovery. C. King.
26 *Mechanism for Replacing Cotton Plugs of Test Tubes Used for Receiving Culture Media. G. C. Chatterjee.
27 Two Cases of Paroxysmal Tachycardia. R. O. Moon.
28 *Blood Pressure in Fevers. J. Davidson.
29 Intussusception in an Infant Three Months Old; Enterectomy; Recovery. F. W. Collinson.
30 Mode of Spread and Prevention of Plague in Australia. J. A. Thompson.

19. **Air, Water and Situation.**—Moore reviews the history of climatology and balneology from the time of Hippocrates and then briefly considers the modern application of air and climate treatment in tuberculosis, endocarditis and septic arthritis.

20. **Vital Properties of Milk.**—In an important article Coplans details the results of a series of experiments arising out of a desire to investigate the comparative reactions of new milk, stale milk, frozen milk and boiled milk toward organisms which, though capable of flourishing in milk, both at air temperature and at blood heat, occur normally in the alimentary tract. From these experiments he finds that the factors controlling the growth of organisms in milk are explicable on the ground of inhibition and latency: 1. New milk possesses certain properties not possessed by boiled milk, manifested toward certain organisms as a process of inhibition of growth, absolute at first, later only partial. 2. New milk possesses certain bactericidal powers, which for the first six hours destroy certain of the organisms, and stay any increase of growth among the remainder. These bactericido-inhibitory properties of new milk are vital; they are destroyed in the process of boiling, and wane with the lapse of time. By latency is understood the series of phenomena, latent period and comparative latency, or absolute and relative quiescence, which first characterize the growth of organisms in an altered environment, e. g., as to food supply, acidity or temperature. The expiration of this latency has lent color to the highly erroneous belief that there have been several additions of organisms to the milk under investigation, by reason of the sudden increases in number at frequent intervals. Two other results of the experiment are that the action of preservatives is to damage the bactericido-inhibitory action of milk, as well as to restrain the growth of organisms; and that the facts relating to this action of new milk form the basis of a method for estimating within certain limits the period which has elapsed since the time of milking. The author sums up his conclusions as follows:

> In the case of the breast-fed infant every feeding serves to hold at bay and diminish the number of organisms present in the stomach. With new milk under ideal conditions of collection and delivery to the household, for only 3½ hours out of 12 hours is the bactericido-inhibitory property effective. With boiled milk inhibition, absolute or partial, toward organisms on the part of the milk is entirely absent. With preserved milk, as soon as the percentage of preservative is lowered by dilution or absorption so that it ceases to check the growth of organisms the milk acts as in the case of boiled milk. With the presumption that the preservative is added at the time of milking and that the delivery of preserved milk takes place twice daily without delay and that the preservative has no harmful effect on the inhibitory power of the milk, nor is on its own account prejudicial to the infant, the effect would be as in the case of new milk. But the presumption that the preservative has no prejudicial effect to the inhibitory properties of milk is disproved by direct experiment and apart from the question of the toxic action of the preservative the milk acts as in the case of boiled milk and of itself affords no measure of protection against the growth of organisms in the bowel.

26. **Substitute for Cotton Plugs for Test Tubes.**—In hot and moist climates the cotton plugs used for closing the mouths of test tubes containing culture media often become overgrown with fungi which penetrate the cotton and deposit their spores on the medium. Chatterjee has resorted to the expedient of inverting a wider but shorter test tube over the one containing the culture medium, which holds the outer tube in position by a light spring attached to a ring, surrounding and fitting on the lower tube. This method has been in use in the Calcutta Medical College for over six months, and has given uniformly satisfactory results. The only disadvantage is in the case of tubes packed for sending by mail, when there is a risk of foreign particles falling in between the tubes while they are inverted.

28. **Blood Pressure in Fevers.**—Davidson points out that a sthenic fever is physiologically one in which the blood pressure keeps high; an asthenic fever one in which it suffers diminution. The fall of pressure is to be ascribed to relaxation of the peripheral arterioles. In sthenic fever increased heart action may more than counterbalance arterial relaxation or the relaxation may be absent; in either event the pressure remains high. When relaxation is very marked, or the cardiac muscle is enfeebled by the circulating toxins, the fall in pressure is progressively more marked as the systole is diminished in fever. Many of the ill effects of fever are in part attributable to the lowering of the blood pressure. Ordinarily, pressure varies directly with the temperature, but in fevers the two influences, pyrexia and intoxication, are at work, and as their effects on blood pressure are opposed, and they are not always proportional to one another, the resultant effect necessarily varies. Davidson reports the results of examinations at the Edinburgh City Hospital. Of 37 cases of simple scarlet fever, in all the blood pressure curve was very similar to those of the pulse and the temperature. In severe scarlatina cases of the anginose type, the blood pressure fell as the toxemia increased. In scarlatinal nephritis in every one of nine cases the blood pressure was raised during the period of albuminuria, often commencing before the trace of albumin had been noted in the urine. In diphtheria reduction of blood pressure was found in every case examined, depending on the degree of toxemia. It showed a marked rise above normal during severe albuminuria. Practically all patients with diphtheria were by routine practice put on strychnin and alcohol, and the fall of blood pressure was to a large extent annulled. In patients who did not receive such stimulation a fall was always noted until the treatment was commenced. During routine administration over long periods the blood pressure response to a single dose was apparently absent or less marked than following the first two doses; but, if the routine was suspended, the blood pressure was noticed to fall accordingly. After the administration of antitoxin in diphtheria, in most cases there is a rise of temperature of one or two degrees, coming on four or five hours after injection. The pulse is accelerated at the same time, usually out of proportion to the temperature. The pulse pressure in almost every case is either reduced or the same, the fall taking place within a quarter of an hour, and passing off within an hour. The effect is evidently one of temporary depression and permanent stimulation. In typhoid fever the blood pressure is always considerably lower, the diminution progressing steadily the longer the duration of the case. The pressure only rises again on the establishment of convalescence or the occurrence of some acute inflammatory complications. Davidson reports one case of supposed scarlet fever, with an irregular temperature curve and a markedly subnormal blood pressure. This aroused suspicion of typhoid fever, which was subsequently confirmed by Widal's test on the first and subsequent examinations.

Medical Press and Circular, London.

October 16.

31 Enlargements of the Liver. W. H. White.
32 *Sudo-Keratosis. R. W. Brimacombe.
33 *Treatment of Tertiary Syphilis. M. von Zeissl.
34 Instruction of Physically Defective Children. R. C. Elmslie.

32. **Sudo-Keratosis.**—This is the name given by Brimacombe to a disease of the skin, the principal feature of which is a

keratosis of the sweat duct, mainly at its outlet. He describes and figures the histology of the condition.

33. **Tertiary Syphilis.**—Von Zeissl says that it is some twenty years since he satisfied himself by experiments and clinical testimony that post-syphilis, as well as the primary and secondary forms, is transmissible and as efficaciously treated by mercury as the other forms, notwithstanding the contrary opinion of Ricord, which has been generally adopted and copied from text-book to text-book. Mercury is even more efficacious than the iodids in tertiary syphilis, and mercurial preparations are energetic in all forms. The gummatous phenomenon seems to exhaust itself or to become modified by treatment, as it is now seldom seen in Austria, where it was formerly very common, but where early treatment now prevails. Post-syphilitic disease of the nervous system is common in Austria, while it is altogether absent in Constantinople, where gummata are plentiful.

Quarterly Journal of Medicine, Oxford.

October.

35 *Remarkable and Hitherto Undescribed Muscular Lesion Occurring in Sprue, with Notes of Case of Peculiar (Myopathic) Muscular Atrophy in which Somewhat Similar Changes Were Present. B. Bramwell and R. Muir.
36 Anemia with Enlargement of the Spleen, Particularly the Family Form. J. Cowan, Glasgow.
37 Excretion of Leucin and Tyrosin in Two Cases of Cardiac Liver. J. Dixon Mann
38 Microbic Cyanosis. G. A. Gibson, Edinburgh.
39 Suprarenal Sarcoma in Children with Metastases in the Skull. R. Hutchison, London.
40 Abnormal Inception of the Cardiac Rhythm J. MacKenzie, Burnley.
41 Hematoporphyrinuria Not Due to Sulphonal. T. K. Monro.
42 *Multiple Hereditary Telangiectases with Recurring Hemorrhages. W. Osler, Oxford.
43 *Ready Method of Measuring Venous Pressure Without a Manometer. G. Oliver.
44 Compressed Air Hemomanometer. G. Oliver.
45 Excretion of Creatinin and Uric Acid in Diseases Involving the Muscles. E. I. Spriggs.
46 *Leukanemia: Its Relation to Leukemia and Pernicious Anemia. J. H. Drysdale.
47 Clinical Sphygmomanometer Yielding Absolute Records of the Arterial Pressure. G. A. Gibson, Edinburgh.

35. **Muscular Changes in Sprue.**—Bramwell and Muir report two cases of typical sprue in which there were marked changes in the voluntary muscles consisting of great proliferation of the nuclei of the sarcolemma and degenerative changes in the muscular fibers. In places the muscular fibers had apparently been completely absorbed by the enlarged nuclei. In the second case there appeared to be some increase of the intramuscular connective tissue, apparently the result of the muscular atrophy. There was no lipomatosis. The authors attribute the muscular changes to the action of some toxin absorbed from the intestine. A case of extreme muscular atrophy is also reported, in which somewhat similar changes were found after death. In this case examinations of the spinal cord indicated that the disease belonged to the class of myopathic atrophies.

42. **Multiple Hereditary Telangiectases.**—Osler describes six forms of telangiectasis: 1. A rosacea on the cheeks, nose and ears in persons exposed to the weather and in heavy drinkers. 2. Small pink spots, often pinpoint in type. 3. Small nodular forms, often congenital. 4. The spider form—a central dot, sometimes raised and nodular, with five or six radiating venules converging in it, often associated with sclerosis of the liver. 5. The mat form. 6. Generalized acquired telangiectasis consisting of stellate venules in large numbers distributed over the trunk or extremities. 7. A multiple hereditary form with recurring hemorrhages. Illustrative of this form Osler reports the case of a physician the subject of numerous telangiectases of the skin of the face, ears and lips, who suffered also from bleeding chiefly from the nose, but also from the spots. This began at his tenth year. It had recently been profuse and resulted in profound anemia. The case was reported in THE JOURNAL, Oct. 6, 1906, by Dr. Coe. Osler saw the patient in January, 1907, and was at once impressed with the remarkable improvement in his appearance. He was no longer anemic, the spots were much less marked. He had been taking calcium lactate, 20 grains three times daily, and some of the more prominent spots had been touched with the electric needle. Telangiectases in this condition are of three kinds: 1. The pinpoint. 2. The spider form, the most common. 3. The nodular variety, which may gradually arise in the center of a spider nevus and form a solid vascular tumor the size of a split pea. With regard to the family history, the patient belongs to a bleeder family. His grandfather, father and one sister had had the spots and had bled in the same way, while his son, a young man of 20, had occasionally epistaxis but no spots. Osler collects eight families reported hitherto as being afflicted in this way. The disease is very serious, bleedings are often severe and frequent, so that chronic anemia has been produced, and even death has ensued. The telangiectases may occur early in life, but are not usually noticed until later. At the outset it is probable that very careful cauterization of the stellate veins in the nostrils would prevent the hemorrhage. In one case in which this was tried, although the patient bled profusely afterward, no severe epistaxis occurred for many months.

43. **Method of Measuring the Venous Pressure.**—Oliver has observed that the venous pressure may be accurately measured without the aid of a blood-pressure instrument, a foot-rule or a measuring tape being all that is necessary. If the veins on the dorsum of the hand are sufficiently visible, it is found that when the hand is held in the vertical position with the fingers extended, and is very gradually raised, the veins at a certain height above the level of the apex of the heart are seen to collapse rather suddenly. The completion of the process is definite, for the transition from a partial to a complete collapse takes place within the space of half an inch. It is observed that the veins near the fingers collapse somewhat sooner than those near the wrist; but the difference is so slight that Oliver prefers to take the collapse of all the veins of the dorsum as the indication for measurement. He concludes that at the moment of collapse of the veins the blood pressure within them is practically nil, being balanced as it were by the force of gravity; we may, therefore, express this force, annulling the hydrostatic rise of the blood, in millimeters of mercury. This may be done by making a very simple calculation. If we take the average specific gravity of the blood as 1.060 and that of mercury as 13.570, the 25.5 mm. contained in one inch will represent 1.985 mm. Hg (or approximately 2 mm. Hg). Therefore, if we multiply by 2 the number of inches above the level of the apex of the heart at which the veins collapse, we ascertain in millimeters of mercury the venous pressure. This simple method of measuring the venous pressure has afforded more uniform results than other methods, and as it enables one to discriminate between differences of 1 mm. it is definite and delicate. It is important to see that the pressure is not artificially raised. This may occur through nervous perturbation or obstruction of the venous flow by tight clothing or even by the observer placing his hand on the forearm. The lowering effect of cold on the venous pressure should also be kept in mind.

46. **Leukanemia.**—Leube has applied the term leukanemia to cases in which both leucocytes and erythrocytes are uniformly and decidedly damaged in their development, when the case can be put neither in the category of leukemia nor in that of pernicious anemia. Drysdale concludes that within the term of Leube's definition there may be, and have been described, different conditions having only a superficial resemblance. The term is, therefore, misleading, useless, and its use might be abandoned. The majority of cases so far described under this head belong to the group of atypical myelocytic leukemias and might properly be described under that name. Acute myelocytic or mixed cell leukemia is a much commoner condition than is generally supposed.

Clinical Journal, London.

October 2.

48 Treatment of Inflammation of the Appendix in Its Incipient Stage. C. Mansell-Moullin.
49 Operative Treatment of the Ascites of Hepatic Cirrhosis. L. Jones.
50 Blood Pressure and the Nervous System. L. Williams.

October 9.

51 Exophthalmic Goiter. N. Moore.
52 *Aural Vertigo and Its Allied Conditions. J. D. Grant.
53 Three Cases of Partial Gastrectomy. E. S. Bishop.

52. **Aural Vertigo.**—Grant gives the following tabular division of vertiginous conditions:

A.—WITH AURAL DISEASE.

(a) *Nerve deafness.*

I. Sudden—
(1) Idiopathic .....Labyrinthine effusion (Ménière's disease proper).
(2) Traumatic (blows, explosions, etc.)....Concussion; hemorrhage in labyrinth.
II. Acute .....Acute labyrinthitis (simple, infectious, etc.).
III. Chronic .....Chronic labyrinthitis, congestion, anemia.

(b) *Obstructive deafness* (Ménière's symptoms).
I. With suppuration.....Congestion, pressure of granulations, purulent labyrinthitis.
II. Without suppuration. .....Tympanic tension, sclerosis, etc.

B.—WITHOUT AURAL DISEASE.

(a) *Unconsciousness.*
(1) Aura, etc. .....Epilepsy.
(2) Momentary unconsciousness—
With cardiac weakness, etc. .....Syncope.
With cough.....Laryngeal vertigo or syncope.

(b) *No unconsciousness.*
(1) Relieved by closing eyes .....Ocular vertigo, neurasthenia, functional vertigo.
(2) Worse on closing eyes. Locomotor ataxia.
(3) Unaffected by closing eyes—
Dyspepsia, etc. .....Gastric vertigo.
Toxic causes.....Toxic vertigo.
Pulse tension.....Renal, gouty vertigo.
Redness of face, etc...Cerebral congestion, climacteric, etc.
Pallor, etc. .....Cerebral anemia.
Injury to head.....Traumatic vertigo, concussion.
Headache, optic neuritis, ophthalmoplegia, paralysis, etc.Organic cerebral disease.
Nervousness stigmata, hemi-anesthesia, etc.Neurasthenia, hysteria.
Unilateral headache, scotoma, etc.....Hemicrania.

British Journal of Children's Diseases, London.

September.

54 *Pneumonia in Children. F. Taylor.
55 Effects of Altitude on School Children in Relation to Physical Exercises. E. P. Baumann.
56 Case of Anterior Poliomyelitis Involving the Muscles of the Trunk. J. M. Fortescue-Brickdale.

54. **Pneumonia in Children.**—In the Wightman lecture Taylor points out that the separation of lobar from lobular pneumonia is a development of comparatively recent times. He goes at great length into statistics with a view to establishing: 1, The relative incidence of bronchopneumonia and lobar pneumonia in young children, and, 2, their relative mortality, and arrives at the conclusions: The results of observation in one time or place can not be accepted for any other time or place; there are probably considerable differences in the incidence of the two forms of pneumonia which are not to be entirely accounted for by the personal equation of the observers, or by prejudicial opinions as to the frequency of one or other form; bronchopneumonia is much less frequent after three years of age; lobar pneumonia occurs in infants probably much more than was the current belief a few years ago; possibly its incidence may be more liable to variation from epidemic or other considerations than that of bronchopneumonia. He reviews the subjects of diagnosis and prognosis, and considers especially the questions of leucocytosis and lumbar puncture. He reviews the history of the treatment, and discusses the modern methods of drug treatment, respectively, by expectorants and depressants, to the latter of which he raises objection. In lobar pneumonia expectorants can be of only secondary value. In bronchopneumonia it has been his custom to give so-called expectorants, especially ipecacuanha and ammonium carbonate, though their mode of action seems doubtful. Ipecacuanha he regards as a drug which modifies secretions from the bronchial mucous membrane, and he believes that it does more good in that way than by driving the secretion already formed out through the larynx. He considers the prospects of a future antitoxic therapy and particularly emphasizes the importance of ventilation, citing Northrup's results, which he contrasts with the canvas tent and steam kettle process of a few years ago, and which even yet survives in some places.

Obstétrique, Paris.

July, XII, No. 4, pp. 289-384.

57 *Later Fate of the Prematurely Born at the Paris Charité, 1898-1907. (Elevage et survie des prématurés.) C. Maygrier.
58 *Infant Mortality in the Rhone District. P. Budin.
59 The Prematurely Born Not Requiring the Incubator. (Le nourrisson prematuré non débile.) Plauchu and A. Challer.
60 *Overcharge of Fat in Endothelial Cells in the Liver of Eclamptics. (Surcharge graisseuse des cellules étiolées dans le foie des éclamptiques.) M. de Kervilly.

57. **Fate of the Prematurely Born.**—Maygrier tabulates the details in regard to the prematurely born children at the Charité, Paris. Out of 46 that weighed less than 1,500 gm. only 15 left the hospital alive, but 103 survived out of 142 that weighed from 1,500 to 2,000 gm., and 516 out of 548 that weighed between 2,000 and 2,500 gm. Six hundred and sixteen of these infants left the hospital in good condition, and 146 have been followed for several years. Only 5 have died, one from bronchopneumonia at 2 months, one from gastroenteritis at 8 months, one from digestive troubles after an operation for impermeable anus, and the others from unknown causes while placed out with a wet nurse. All but 30 of the infants had breast milk, and 18 of these had partly breast milk. This survival of 96.58 per cent. of the prematurely born is ascribed by Maygrier in large part to the beneficent work of the "nursling consultations" to which the children were brought with more or less regularity during the first year or so.

58. **Infant Mortality.**—This address was prepared by Budin to deliver at Marseilles as a plea for the organization of "nursling consultations." He cites statistics showing the remarkable drop in the death rate of infants at all places where they have been introduced. He was unable to deliver the address, as he died from pneumonia. He had urged his friends, however, to see that his article was published. The "consultations" are now being introduced all over France, in some cases by private initiative, but more frequently by the municipal authorities.

60. **Fat in the Endothelial Cells of the Liver in Eclampsia.**—Kervilly found that he was able to distinguish the livers from eclamptic women by the abundance of fat in the "star" endothelial cells in the liver. There was no fat in the control livers. He examined 16 livers and describes the findings in detail, remarking that this abundance of fat in the endothelial cells of the liver may be the only distinctive histologic lesion in eclampsia.

Presse Médicale, Paris.

October 5, XV, No. 80, pp. 633-640.

61 *20 Cesarean Operations. E. Bonnaire.
62 Megacolon. A. Baumgartner.
63 *Vicious Consolidation of Fractures and Earning Capacity P. Desfosses.

October 9, No. 81, pp. 641-648.

64 *Differentiation of Hemolytic Jaundice by Deplasmatized Red Corpuscles. F. Widal, P. Abrami and Brulé.

61. **Cesarean Section.**—Bonnaire has performed Cesarean section twenty times in the course of the last 10 years. The operation was done *in extremis* in 2 cases, to save the children, and in a third case, with cancerous degeneration of the cervix, the patient succumbed during the succeeding hysterectomy. With these exceptions all the patients recovered rapidly and 16 of the children left the hospital in good health. The death of 2 of the children can not be ascribed to the operation, while 2 others were stillborn. He regards these results as so favorable that Cesarean section should be regarded as no more dangerous for the mother than forceps delivery, while the outcome for the child is much better. He remarks in conclusion that during the hundred years preceding 1876 not one of the women delivered at Paris by Cesarean section survived the operation, which was then equivalent to a sentence to death.

63. **Vicious Consolidation of Fractures.**—Desfosses comments on the recent legislation in regard to indemnities for industrial accidents, remarking that a workman with a fractured arm is much more interested now in getting his indemnity than he is in exercising the injured limb to restore normal functioning. The functional capacity of a fractured limb depends, of course, somewhat on the nature of the fracture, but much more on the moral energy of the individual. He cites as an example of what can be accomplished the case of the "monkey man," a Spanish acrobat, who has met with numerous accidents in his career, including fractures of the bones in both legs and both bones in the right forearm, besides several ruptures of muscles and dislocations of joints. The fractures healed in vicious posi-

tion and consolidation is far from perfect, yet the man, now 54, has never allowed them to interfere with his professional work. He has traveled over Europe and in America, constantly giving exhibitions on the flying trapeze, etc., illustrating the old saying, "A vigorous soul is master of the body it animates." The defective consolidation of three of the fractures is shown in skiagrams.

64. **Hemolytic Jaundice and Means of Differentiating It.**—Widal and his coworkers publish a comprehensive study of 4 cases of jaundice presenting different types. In the first the clinical picture was that of Hayem's jaundice with splenomegaly, a pernicious form of anemia with icterus; the affection had pursued a progressive course during the last five years. In the second patient an infectious icterus developed in the course of a serious condition of septicemia, with profound anemia. In the 2 other cases the jaundice in father and daughter was evidently congenital. All 4 cases are typical forms of hematogenous jaundice, and examination of the resisting power of the red corpuscles enables this variety to be differentiated from jaundice originating in the bile apparatus. Separating the reds from the plasma of the blood and then testing them with hypotonic saline solution will reveal a peculiar fragility on the part of the red corpuscles, explaining their ready destruction in tnis form of jaundice.

Revue de Chirurgie, Paris.

September, XXVII, No. 9, pp. 285-388.

65 "Spigel's Semilunar Line." (La ligne semi-lunaire de Spigel.) F. Terrier and P. Lecène.
66 •Wounds of the Gall Bladder. (Plaies de la vésicule biliaire.) Couteaud.
67 Congenital Subluxation of the Wrist. (Maladie de Madelung, etc.) E. Estor. (Commenced in No. 8.)
68 Myocele, and Especially Myocele from Simple Rupture of the Aponeurosis. (Hernies vraies des auteurs.) R. Pichon. (Commenced in No. 8.)

October, No. 10, pp. 389-550.

69 •Accidents of the Wisdom Tooth. (Accidents de la dent de sagesse.) L. Dieulafé and A. Herpin.
70 •Surgery of the Thyroid. (Goitres et strumites.) X. Delore and A. Chalier.

66. **Wounds of the Gall Bladder.**—Couteaud reports a case of stab wound of the gall bladder, in which the knife passed through the gall bladder to enter the liver. Hemorrhage was extensive; the wounds were sutured four hours after the injury and the peritoneum wiped dry. Peritonitis set in later, and notwithstanding a palliative artificial anus the patient succumbed three days after the accident. Couteaud has found 39 somewhat similar cases on record, with operative treatment in 11 and recovery of all the patients except one. When operative treatment was not attempted, the patients survived on an average only four or five days. He summarizes the details of the surgical cases from the literature and discusses technic and prognosis.

69. **Evolution of the Wisdom Teeth.**—Dieulafé and Herpin have been making a special study of the development and anatomy of the lower jaw, and devote this article to the evolution of the wisdom teeth and the accidents liable to occur, their frequency, clinical manifestations and treatment. The trouble is generally of mechanical origin, with secondary infection, and it may involve the mucosa, bone and nerves. The nervous complications are usually trigeminal neuralgia, radiating to the eye or ear. Amblyopia has been observed, as also facial paralysis, interstitial keratitis, photophobia, buzzing in the ears, paralysis of the arm, epileptiform convulsions, chorea and mania, alopecia areata and erysipelas of the face. Treatment consists in cauterization of the protruding gum, removal of the tooth and curettement of the bone in case of osteitis, with the usual treatment for phlegmons, etc. Prophylactic treatment consists in pulling the six-year tooth as the twelve-year tooth appears. This gives room for the wisdom tooth to develop without disturbances.

70. **Surgery of the Thyroid Gland.**—Delore and Chalier report the experiences with goiters and inflammation of the thyroid gland at Poncet's clinic at Lyons a total of 73 operations on the thyroid gland in which the end result is known. An operation is deemed necessary when functional disturbances develop indicating compression of the neighboring organs, especially the trachea, from a large goiter, also in case of a retrosternal or fibrous goiter or hemorrhage into a cyst or a hematocele. It is also indicated when there are nervous symptoms of thyroid origin as in typical exophthalmic goiter, or a thyroid psychosis. Even when the goiter causes no disturbances it is considered best to remove it to avert complications later. Cancer in the thyroid generally develops in a pre-existing goiter, and in the endemic foci of goiter there is cancerous degeneration, he declares, in one out of every four goiters. Cachexia is the only contraindication to operative treatment of every goiter encountered; it is sometimes observed in certain forms of goiter in the aged. Poncet uses a small amount of ether, preceded by ethyl chlorid, for the anesthesia. With the exception of one patient who succumbed to postoperative pneumonia, all the patients rapidly recovered and none has returned with a recurrence of trouble. In 10 out of the 12 cases of inflammation of the thyroid gland there had been a pre-existing goiter. The case histories and operative technic are reviewed in detail.

Revue de Gynécologie, Paris.

XI, No. 4, pp. 579-752.

71 Five Cases of Acute, Diffuse Peritonitis Following Ruptured Pyosalpinx. G. Cotte and A. Chalier.
72 •Operative Treatment of Primary Cancer of the Vagina. P. Himmelfarb.
73 Retrovesical Hydatid Cysts in the Male. D. J. Cranwell.
74 •Surgical Exploration of the Hilus of the Kidney. (Exploration chirurgicale du bassinet.) P. Delbet and Mocquot.

72. **Cancer of the Vagina.**—Himmelfarb reports a case in which, for primary cancer of the vagina, he removed vagina, uterus and rectum. Three years have elapsed since the operation and the patient is still in the best of health. Consequently he advocates this as the standard technic in such cases and gives minute directions.

74. **Exploration of the Hilus of the Kidney.**—The anatomy and the clinical manifestations of hydronephrosis, pyelitis, etc., are described and a number of illustrations given to show the technic of exploring the kidney. From this material and from experimental research the lesson is drawn that in every case in which the kidney is not fastened by abnormal adhesions, posterior pyelotomy allows readier and more complete access to the upper secretory passages in the kidney, with other advantages over nephrotomy, while it does not expose to accidents, and is exceptionally convenient for extraction of calculi.

Beiträge zur klinischen Chirurgie, Tübingen.

LII, No. 1, pp. 1-299.

75 Roentgen Examination of Bladder and Kidney Hilus. (Cystographie und Pyelographie.) F. Völcker and A. v. Lichtenberg.
76 •Differential Diagnosis of Icterus. L. Arnsperger.
77 Comparative Research on Biologic and Therapeutic Action of Radium Rays. (Biologische und therapeutische Wirkung der Radiumstrahlen.) R. Werner.
78 Experimental Research on Radiation of Tissues and Its Biologic Importance. (Strahlung des Gewebes und deren biologische Bedeutung.) Id. and A. v. Lichtenberg.
79 Two Cases of Spontaneous Gangrene of the Hand. (Spontangangrän der oberen Extremität.) G. Hirschel.
80 Suture of Fractured Patella. (Naht bei Patellafrakturen.) R. Lewisohn.
81 Spinal Anesthesia with Stovain, Alypin and Novocain. B. Baisch.
82 Disadvantages of Ready-made Solutions Containing Suprarenin for Local and Spinal Anesthesia. F. Liebl.
83 Endothelial Tumor of the Palate. (Zur Kenntnis der endothelialen Geschwülste der Kopfregion.) E. Looser.
84 Case of Congenital Cystic Lymphangioma of the Neck. A. Nast-Kolb.
85 Typical Trade Deformity of the Right Hand. (Gewerbedeformität.) L. Eloesser.

No. 2, pp. 301-559.

86 Mechanical Processes in Fracture of the Diaphyses of the Long Bones. (Mechanischen Vorgänge beim Brechen der Diaphysen der Röhrenknochen.) H. Zuppinger.
87 Relations between Hernia and Ruptures of the Intestines. (Beziehungen zwischen Hernien und Darmrupturen.) L. Talke.
88 Pathology and Treatment of Acute Intestinal Occlusion. (Akuter Darmverschluss.) H. Rubritius.
89 Atelectasis of the Lung in the Roentgen Picture. (Lungenatelektasie in Röntgenbild.) v. Lieblein.
90 Cysts in Long Bones and Artificial Substitute for the Bone. (Cysten in den langen Röhrenknochen nebst Bemerkungen über künstlichen Knochenersatz.) Braun.
91 Bone Cysts. (Knochencysten.) A. Tietze.

76. **Differential Diagnosis of Jaundice.**—All the articles in this issue of the *Beiträge* are from Czerny's surgical clinic at Heidelberg, Arnsperger describes various forms of jaundice and states that it is possible to differentiate the icterus from gallstone occlusion from that due to a tumor or resulting from a parenchymatous affection of the liver. In case of gallstones

obstructing the common bile duct, the jaundice commences suddenly, with pain, after colics with and without icterus. The patient shows signs of cholangitis and seems very sick, with sometimes a general septic condition. In cases of long standing the liver is enlarged, with a tendency to cirrhosis; in the early stages only the right lobe is enlarged. The gall bladder can not be palpated, but the region is tender and also the epigastrium. The stools are sometimes with and sometimes without admixture of bile; the urine contains much bilirubin but no urobilin, and the blood is approximately normal. In case of occlusion of the common bile duct by a malignant tumor, the jaundice comes on gradually and without pain, but with increasing cachexia. The liver is enlarged throughout. The gall bladder is palpable and distended. Ascites is also observed, and the stools are constantly clay colored. There is also a tendency to hemorrhage and a low hemoglobin percentage. Functional icterus from a parenchymatous affection of the liver comes on slowly, with remissions sometimes for years; pains at times, but no actual colics. Syphilis or chronic intoxications will be discovered in the anamnesis. The liver and spleen are both enlarged, but there is no tenderness in the gall-bladder region and the gall bladder can not be palpated. Urobilin is found in the urine, but no bilirubin. The stools are of normal aspect. The blood is sometimes much altered, with poikilocytosis and tardy coagulation. He describes a case of the latter form of jaundice differentiated in time to prevent operative treatment and much improved by mercurial treatment alone.

Berliner klinische Wochenschrift.

October 7, XLIV, No. 40, pp. 1267-1298.

92 *Case of Progressive Atrophy of Muscles, and Discussion of Rachitic Pseudo-paraplegia. H. H. Schmidt.
93 *Retrogression to Embryonal Conditions in Blood Production, etc., and Origin of Malignant Tumors. (Rückschlag in die embryonale Blutbildung und Entstehung bösartiger Geschwülste.) C. S. Engel.
94 Case of Infected Hydronephrosis with Anomaly in the Course of the Ureter. P. Manasse.
95 Construction of a Kyphotic Spine. (Eine nach Form zusammengesetzte kyphotische Wirbelsäule.) H. Virchow. Commenced in No. 39.
96 *Paratyphoid and Infection from Food. (Paratyphus und Nahrungsmittel-Infektionen.) K. Kutscher.

92. **Progressive Atrophy of the Muscles.**—A boy of four presented the clinical picture of severe, progressive atrophy of the muscles, coming on in the midst of apparent health, about six months before. After the affection had continued a progressive course for a year, the muscles of the legs became painful. The child was not seen again for nearly three years, when he appeared, walking, having recovered from the atrophy of the muscles, but presenting pronounced signs of rachitis. There were no indications of rachitis when the child was examined previously. The case suggests the rachitic pseudo-paraplegia described by some authors, but Schmidt does not accept this conception, regarding the case as one of myopathic dystrophy, Erb's simple atrophic form, or else of chronic atrophic infantile spinal paralysis. On the other hand, no case of recovery is known of Erb's paralysis and the absence of fibrillary contractions speaks against the other affection.

93. **Return to Embryonal Conditions in Etiology of Cancer.**—Engel discusses the retrogression to embryonal conditions sometimes noted in the blood-forming organs and in organs which do not form blood after the embryonal stage is past. In adults the liver, for example, has nothing to do with blood production, but in infections, anemias, myeloid leukemia and congenital syphilis, it resumes its blood-producing activity. He believes that a similar return to embryonal conditions occurs possibly in other tissues and organs. If some cells in the epithelium should develop this cellular atavism and reassume embryonal conditions, they would be endowed with the intensive proliferating capacity of the embryonal cell. Being surrounded by differentiated, functioning cells, they would not be held in check as in embryonal conditions. The result would be unlimited proliferation, and this is just what is observed in malignant growths. He analyzes the conditions in the pregnant uterus to show how embryonal cells are held in check in physiologic conditions, and how the conditions are like those of a malignant growth when the physiologic conditions change to pathologic, as in case of a mole. Landau has observed the chorionic villi burrowing deep into the musculature of the tube in cases of tubal pregnancy, the embryonal cells not being held in check by the embryonization of the mucosa as in case of a normal uterine pregnancy. Embryonal tissue has a disturbing influence on cancer, as Ehrlich has demonstrated with tumors on mice. Haaland also has reported that gravid mice could scarcely be infected with mouse cancer, while after the young had been cast the tumor grew rapidly. The conclusion of Engel's arguments is the suggestion that the application of young human embryos may have an immunizing and possibly a curative effect in case of malignant tumors in man.

96. **Paratyphoid and Infection from Food.**—Kutscher reviews the history of meat poisoning, botulismus and other intoxications from food, as published in late years. He deplores the term "paratyphoid" as in 60 per cent. of the cases or more the clinical picture was not at all like that of typhoid, but commenced with a stormy onset, chills and fever. The paratyphoid bacilli are not destroyed by heat until they have been kept at 158 F. for ten minutes. Their toxins also resist high temperatures for a long time. He endorses Uhlenhuth's suggestion that the temperature of every animal should be taken before slaughtering. This would reveal pathologic conditions that might escape other tests.

Correspondenz-Blatt für Schweizer, Basle.

September 15, XXXVII, No. 18, pp. 561-592.

97 *Action of Chrysarobin on the Kidneys. (Toxische Wirkung von Chrysarobin auf die Nieren, und seine Ausscheidung.) M. Winkler.
98 *Clinical and Histologic Study of Enlarged Tonsils. (Rachenmandelhyperplasie.) Lindt. Commenced in No. 17.
99 *Effect on Health of Working in Moist Heat, Especially in Embroidery Factories. (Gesundheitsschädliche Folgen der Arbeit in hochtemperierten Räumen.) O. Roth. Commenced in No. 17.

October 1, No. 19, pp. 593-694.

100 Infantile Scorbutus in Children Fed with Sterilized Milk. (Säuglings-Scorbut bei Ernährung mit homogenisierter Berner Alpenmilch.) Bernheim-Karrer
101 Leprosy in Switzerland. (Leprafrage in der Schweiz.) E. Pfister.

97. **Elimination of Chrysarobin.**—Winkler reviews the literature on the subject and reports experiments which demonstrate, he thinks, that the elimination of chrysarobin, applied internally or externally, does not proceed by way of the kidneys. Only minimal amounts are eliminated in the urine and consequently there is little if any danger of nephritis from this cause.

98. **Enlarged Tonsils.**—Lindt found latent tuberculosis in five out of fifty cases of enlarged tonsils. He thinks that the tonsils are organs of defense, and if called on for defensive action too frequently they become enlarged. In case of interference with breathing or frequent catarrhs or general symptoms from the enlarged tonsils, he advises their removal under local anesthesia, not forgetting to treat anything abnormal found in the adjacent organs. Tuberculosis in his five cases was disseminated through the tonsils, and there was no appreciable tuberculous lesion elsewhere except a suspicious staccato respiration in one patient, and a complicating middle-ear affection in a boy of 4, with a fistula in the mastoid process. The process in the tonsils was entirely latent and no other tuberculous lesion could be discovered.

99. **Working in Moist Heat.**—Roth has been examining the conditions in embroidery and other factories where the work requires the rooms to be kept very hot and at times the air to be saturated with moisture. Extreme heat makes such demands on the system, he says, that only healthy persons should be employed where it is necessary, and no person under 18 years of age. Fanning the air, even without its renewal, makes the high temperature much more bearable. When the air is thus kept in motion and there is not too much humidity, he found that temperatures up to 50 C. (122 F.) could be borne temporarily. The extremes of temperature render employés more susceptible to "catching cold" and its consequences, but otherwise those examined were in ordinary health.

Jahrbuch f. Kinderheilkunde, Berlin.

LXVI, No. 1, pp. 1-128. Last indexed, September 28, p. 1152.

102 *Intoxication in the Course of Alimentary Disturbances. (Alimentäre Intoxikation, Part III.) H. Finkelstein.

103 Progress of Breast-fed Infants in Maternities and Influence of Puerperal Fever in the Mother. (Gedeihen der Kinder in Gebäranstalten.) F. Kermauner.
104 Congenital Muscular Atony. (Myatonia congenita Oppenheim.) L. Tobler.
105 Infant Feeding with a Buttermilk Preparation. (Ernährung mit "Holländischer Säuglingsnahrung.") H. Koeppe.
106 *Influence of Organic Elements of Food (albumin, fat, carbohydrates) on the Lime Metabolism of Bottle-Fed Infants. (Einfluss der organischen Nahrungskomponenten auf den Kalkumsatz Künstlich genährter Säuglinge.) O. Rothberg.

No. 2, pp. 129-258.

107 Influence on the Children of Consanguinity in the Parents. (Einfluss der Blutverwandschaft der Eltern auf die Kinder.) E. Feer.
108 Hutchinson Teeth. (Zur Klinik der Heredosyphilis.) E. Oberwarth.

No. 3, pp. 259-364.

109 *Research on Solutions in Infants' Stomach. (Lösungen im Säuglingsmagen.) G. B. Allaria.
110 The Cushion of Fat in the Cheeks of Infants. (Das Wangenfettpolster der Säuglinge.) H. Lehndorff.
111 Magnesium Metabolism in Infants. (Magnesiumumsatz des Säuglings.) W. Birk.
112 *Congenital Relative Stenosis of Pylorus in Infants. (Pylorusstenose des Säuglings.) E. Fuhrmann.

102. **Alimentary Intoxication.**—Finkelstein recognizes four stages: First, the "disturbance of the normal balance," then the "dyspeptic phase," then the "decomposition phase," and lastly "intoxication." All the various forms of alimentary disturbances are fundamentally the same, and all lead up to the final intoxication. All display the "paradoxical reaction" of injury of the organism, as shown in loss of weight, when the amount of food is increased. Besides this "paradoxical reaction," and the symptoms on the part of the stomach and intestines, he says that the weight, temperature, heart action, respiration, movements, composition of the urine and the psychic and nervous phenomena must all be taken into account. He cites a number of case histories to elucidate the various points he brings out.

106. **Influence of Composition of Food on Lime Metabolism in Infants.**—Rothberg's research demonstrates that the composition of the food has a direct and important influence on the lime metabolism. When there is much fat in the milk given a group of bottle-fed infants, the balance of lime was negative, while it was positive always in another group fed with skimmed milk. The amount of lime ingested seems to have only a secondary influence on the lime metabolism, which is influenced most unfavorably by fat and next by carbohydrates. The retention of lime in the experiences related was dependent on the greater or less proportion of fat in the food, even in some rachitic children. The processes that determine retention of lime occur in the intermediary metabolism and in the intestines. It seems to be the rule that intake of fat induces increased elimination of alkalies and of alkaline salts. As only a small amount of neutral fat is eliminated, there must be a formation of calcium soaps from the products of the splitting of the fat. Czerny has also reported the observation of a long series of severe cases of rachitis in children fed with whole milk. Rothberg is convinced that the fat in the whole milk was probably responsible for the loss of lime in these cases.

109. **Importance of Molecular Concentration of Food Given to Infants.**—Allaria raises a warning note in respect to the great importance of the concentration of fluids fed to infants. The molecular concentration should be approximately the same as that of the blood. When more concentrated, the organic juices are attracted into the digestive tract and diarrhea is liable to result, with far-reaching disturbances. The advantage of a water diet in enteritis is principally due to the rapid absorption of the hypotonic water, counteracting the depletion of fluids and inducing copious diuresis. It is a simple matter to determine the molecular concentration of the infant's food by means of cryoscopy. He gives the tabulated findings in respect to the molecular concentration of the stomach content after a test meal, the electric conductibility and the internal friction. The tests reported were made repeatedly on seven infants and were repeated several times after the test meals. Some of the facts observed suggest that the stomach wall absorbs water. The osmotic phenomena observed in the stomach, while unmistakably apparent, yet proceed so very slowly that the stomach contents are passed along into the intestines long before an osmotic balance has been reached. The osmotic interchange proceeds rapidly and unhindered in the intestines, and explains many points in clinical experience, such, for instance, as the cure of diarrhea by omitting sugar from the infant's food, when it is found that the mother has been giving it considerable sugar. If the food is highly concentrated there is liable to be serious intoxication; Keller has reported the rapid death of rabbits fed with a strong solution of sugar; the same thing occurs when they are fed with a strong solution of salt which attracts water copiously into the intestines, leaving the tissues drained of their normal quota. It should be made a rule in infant feeding and in weaning infants, he declares, to have the molecular concentration of the food approximately the same as that of the blood.

112. **Congenital Relative Stenosis of the Pylorus in Infants.**—Fuhrmann has had a child under observation for several years and now developing normally, who in early infancy presented a relative stenosis of the pylorus in the course of an acute gastritis. From this and other experiences he advocates lavage of the stomach in all pronounced cases, especially when there are signs of gastritis, and also rinsing the stomach with alkaline mixtures and Carlsbad water. In the recent cases the condition can generally be brought under control by regulating the feedings, not allowing the child to nurse for more than three minutes at a time, at two-hour intervals. Medicinal treatment is entirely useless; pepsin and hydrochloric acid do not do the slightest good and frequently aggravate the condition by irritating the mucous membrane. In case of failure of all medical measures operative intervention must be considered, leaving it to the surgeon to decide whether to do a gastroenterostomy, a plastic operation on the pylorus or the Soreta operation—dilating the pylorus through the stomach.

Münchener medizinische Wochenschrift.

October 7, LIV, No. 41, pp. 2017-2072.

113 Molecular and Ion Concentration of Mineral Waters and Their Radioactivity. H. Strauss.
114 *Intravenous Strophanthin Treatment. M. Hedinger.
115 *Nuclear Icterus of New-born Infants. (Kernikterus der Neugeborenen.) R. Beneke.
116 Motor, Sensory and Vasomotor Disturbances Caused by Sclerosis of the Coronary Arteries and Other Affections of the Left Side of the Heart. E. Schmoll.
117 *Morphology of Urine and Bile. A. Veit and K. J. Wederhake.
118 *Cure of Iritis, Iridocyclitis and Blennorrhea Neonatorum. V. Fukala.
119 Ichthyol in Gonorrheal Epididymitis. C. Philip.
120 Collargol in Affections of Ears, Nose and Throat. (Collargol und seine Anwendung bei Ohren- Nasen- und Halserkrankungen.) Friedmann.
121 *Anatomic and Physiologic Observations During First Thousand Spinal Anesthesias. (1,000 Rückenmarksanästhesien.) B. Krönig and C. J. Gauss. Commenced in No. 40.
122 *Isolated Subcutaneous Transverse Laceration of Pancreas Cured by Operation. (Isolierte subkut. Querzerreissung des Pankreas.) F. Hohmeier.
123 Pregnancy and Normal Childbirth in Two Cases of Paralytic Dementia. Bauer.
124 Celluloid Flat-Foot Insoles. (Zelluloidtechnik bei Herstellung von Plattfusseinlagen.) K. Lengfellner.

114. **Intravenous Administration of Strophanthin.**—Hedinger reports fifteen more patients treated by intravenous injection of strophanthin, a total of sixty-five injections in the last four months. When the drug is absolutely pure no by-effects are observed, and no symptoms of a cumulative action appear when the proper dosage is observed, that is, 1 mg. of the strophanthin once in twenty-four hours, no oftener. Its action is exactly the same as that of digitalis given by the mouth, he claims, and it can be substituted for the latter whenever it is contraindicated for any reason. A number of case histories are related to show the benefit from the strophanthin; in one in particular the patient was unable to tolerate digitalis by the mouth, but his chronic cardiac insufficiency was kept under control with twenty intravenous injections of strophanthin in the course of three months.

115. **Nuclear Icterus in New-Born Infants.**—Beneke describes a case in which twins died the second day after birth, each presenting icterus, with intense yellow discoloration of many of the nuclei in the brain and ganglia, and of patches of necrosis in the stomach. The children died in convulsions. Another child born a few years before had presented the same symptoms, and two pregnancies afterward terminated in stillbirths.

117. **Morphology of Urine and Bile.**—Veit and Wederhake report research which suggests that the amyloid bodies have a differentiating value in bladder and kidney affections. Exam-

ination of the urine from 150 persons showed that the amyloid bodies occur frequently in pathologic conditions while they are absent in normal urine. In certain urines there was nothing to suggest anything morbid except the presence of amyloid bodies, but it was always found that the individuals in question had at some time passed through scarlet or typhoid fever or diphtheria. The sex or age did not seem to affect the findings, the amyloid bodies being found in children of 5 as well as in men of 70. They were not observed in kidney affections, and consequently their presence indicates a bladder affection. This is especially important when the findings otherwise all point to the kidneys. The absence of the amyloids excludes a catarrhal bladder affection. They were found frequently in gallstones, especially toward the center, and are possibly a factor in the production of calculi in the biliary passages and bladder. A simple way to determine the presence of amyloid bodies is to pour pure tincture of iodin over the specimen, draining without rinsing, and then pouring over the specimen an alcoholic solution of crocein scarlet, allowing it to remain in contact for half a minute; then rinse and dry with blotting paper and mount as usual with glycerin.

118. **Cure of Iridocyclitis, Iritis and Gonorrheal Ophthalmia.**—Fukala dilates the pupil to the maximum with a 2 to 4 per cent. solution of atropin and then instils a 5 to 15 per cent. solution of cocain with the patient reclining. Then he dips a scrap of cotton in a 1 to 4,000 solution of corrosive sublimate and wipes out the conjunctiva, concluding by instilling atropin again; he repeats the procedure once a day. He regards the sublimate as an actual specific in these cases, and cites a number of cases in detail to show its efficacy. In ophthalmia neonatorum he has found a 4 or even 5 per cent. solution of silver nitrate none too strong in serious cases, applying it on a wad of cotton, held with forceps, repeating the application twice a day, everting the lids. In severe cases mere instillation into the conjunctival sac of a solution of silver nitrate does no good, but wastes precious time and opportunity.

121. **Experiences with 1,000 Spinal Anesthesias.**—Krönig and Gauss state that with their present technic for anesthesia their last 600 laparotomies have not presented an instance of postoperative bronchitis. The tendency to postoperative vomiting has also diminished. During the last 500 laparotomies there has not been a case of postoperative mechanical ileus. In their last 100 laparotomies, 71 of the patients were able to leave the bed the first day after the operation. They ascribe these results to their technic for anesthetization. It is a combination of the scopolamin-morphin "twilight sleep" with spinal anesthesia. Contrary to the practice elsewhere, they use this combination for laparotomies and reserve inhalation anesthesia for minor operative interventions. They prefer the combined spinal anesthesia now for all laparotomies, all major vaginal operations and prolapse operations, in which postoperative vomiting is such a drawback. On the other hand, they give the anesthetic by inhalation for all the minor gynecologic and obstetric operations requiring only brief anesthetization. They state in regard to spinal anesthesia that the fluctuation of the cerebrospinal fluid in the subarachnoid space should be determined before and during the injection. The specific gravity and temperature of the injected fluid are important factors in its action. The pelvis should not be raised even a long time after injection of the anesthetic for fear of injury to the medulla oblongata. As only chemically pure solutions should be employed, the suprarenal extract should not be added to the anesthetic until just before it is to be used. During the first 400 spinal anesthesias at the clinic three deaths occurred, for which the spinal anesthesia might have been responsible, but since the technic has been improved there has not been a mishap during the last 300 cases. Many patients objected to operations under spinal anesthesia while they were conscious, so the combination with scopolamin-morphin was tried, the results proving unexpectedly good, so that it is now the standard procedure. Headache is an occasional disagreeable by-effect of spinal anesthesia, but it is not much less dangerous and annoying than the vomiting after inhalation anesthesia.

122. **Isolated Subcutaneous Laceration of Pancreas.**—The only symptom in the case of severe abdominal contusion reported was the extremely rigid abdominal wall. Nothing abnormal was found when the abdomen was opened until careful search revealed a transverse laceration of the pancreas. The foramen of Winslow was impermeable, which explained the absence of blood below in the abdominal cavity. The pancreas was torn entirely across, as also its peritoneal covering. The halves were sutured together with three catgut stitches and the patient, a woman, recovered rapidly, but the fistula persisted for months until she was put on a strict anti-diabetic diet, when the fistula healed in ten days.

Gazzetta degli Ospedali, Milan.

October 6, XXVIII, No. 120, pp. 1251-1266.

125 *Glycerin in Differentiation of Typhoid and Colon Bacilli. (Glicerina come mezzo per differenziare il bacillo di Eberth dal coli comune.) T. Silvestri and C. Tosatti.

125. **Glycerin an Unfavorable Culture Medium for Typhoid and Colon Bacilli.**—Silvestri's experiments always resulted in the absence of proliferation of the typhoid and colon bacilli in glycerin. It seems to have an elective inhibiting action on them. For this reason he gives glycerin to patients with acute affections of the digestive tract, and has found it extremely beneficial in hundreds of cases. He believes that it is the best means at our command in typhoid fever, in dysentery, acute enterocolitis and infectious jaundice. He gives adults from 80 to 100 gm. of the glycerin in about a quart of lemonade every day. His research has demonstrated, he thinks, that the glycerin not only favors the physiologic fermentations, opposing the abnormal, but it saves the glycogen in the liver, and, as part of the glycerin is eliminated through the biliary passages, it disinfects them and stimulates the flow of bile.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

DYSPNEA AND CYANOSIS: Part 1 of Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Edmund von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Authorized English Translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College. Pp. 253. Cloth. Price, $1.50. New York: E. B. Treat & Co., 1907.

COMMONER DISEASES OF THE EYE. By Casey A. Wood, M.D., C.M., D.C.L., Professor of Ophthalmology, Northwestern University, Chicago, and Thomas A. Woodruff, M.D., C.M., L.R.C.P. (London), Ophthalmic Surgeon, St. Luke's Hospital and St. Anthony de Padua Hospital, Chicago. Third Edition, Enlarged and Improved. Cloth. Pp. 598. Price, $2.50. Chicago: W. T. Keener Co., 1907.

THE TECHNIQUE OF VAGINO-PERITONEAL OPERATIONS. By E. Wertheim and Th. Micholitsch. Translated into English by Cuthbert Lockyer, M.D., B.S., M.R.C.P. (Lond.), F.R.C.S. (Eng.), etc. With 138 Illustrations. Cloth. Pp. 323. Price, $7.50. MacMillan & Co., Ltd., St. Martin's Street, London, 1907.

A MANUAL OF ORTHOPEDIC SURGERY. By Augustus Thorndike, M.D., Assistant in Orthopedics at the Harvard Medical School; Visiting Surgeon to the House of the Good Samaritan, etc. With 191 Illustrations. Leather. Pp. 401. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1907.

PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia. Eighth Edition, Revised and Illustrated. Pp. 1317. Cloth. Price, $5.50. Philadelphia: W. B. Saunders & Co., 1907.

DISEASES OF THE SKIN. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Pp. 1150; 301 illustrations, including 34 full-page colored and half-tone plates. Cloth. Price, $6.00. Philadelphia: W. B. Saunders & Co., 1907.

KIRKE'S HANDBOOK OF PHYSIOLOGY. By Charles Wilson Greene, A.M., Ph.D., Professor of Physiology and Pharmacology in the University of Missouri. Sixth American Revision. Pp. 723; 507 Illustrations. Cloth, $3.00. New York: William Wood & Co., 1907.

A TEXT-BOOK OF PHYSIOLOGY. By Isaac Ott, A.M., M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Second Revised Edition with 393 Illustrations. Pp. 815. Cloth. Price, $3.50. Philadelphia: F. A. Davis Co., 1907.

THE DANCING MOUSE. By Robert M. Yerkes, Ph.D., Instructor in Comparative Psychology in Harvard University. Cloth. Pp. 299. Price, $1.25. New York: The Macmillan Co., 1907.

THIRTY-FIFTH ANNUAL REPORT of the Health Department of the City of Boston, for the Year 1906. Paper. Pp. 153. Boston: Municipal Printing Office, 1907.

SICK NURSING. By H. Drinkwater, M.D., Author of "First Aid to the Injured." Cloth. Pp. 138. New York: Macmillan Co., 1907.